

belonging to the U.S. for promoting
Agriculture

THE

RURAL MAGAZINE,

AND

LITERARY EVENING FIRE-SIDE.

VOL. I. PHILADELPHIA, Third Month, 1820. No. 3.

FOR THE RURAL MAGAZINE.

THE DESULTORY REMARKER.

No. II.

Virtue is a good,
No foe can spoil, and lasting to the grave.

Glover.

To that branch of the harmonious family of Literature, of which the ESSAYIST is a legitimate member, one peculiar immunity has uniformly been accorded. He has permission, at all times, to commune with his readers, unrestrained by drawing-room etiquette, and without being required to appear in full dress. He can, in this respect, plead immemorial usage, or literary common law, as a privileged personage. But, as neatness of costume and decorous deportment are never disregarded, by the well-bred man, in any circumstances; so, the well-bred writer will not fail in his observance of neatness of style, and, what is of infinitely more importance, correctness of sentiment. Familiarity, inordinately indulged, is another name for rudeness. Motives of the most imperious character, calculated to prompt him to such a course of conduct, may be found, in contemplating the splendid union of talent and virtue, by which many of those were distinguished, who have trodden the same path be-

fore him. They were alternately engaged, in culling, from its borders, flowers variegated with every tint of beauty, or in gathering the ripest, most salutary, and most delightful fruit. Although, on the authority of Bacon and Roscommon, the author of the "English Dictionary" has defined an ESSAY to be "*an irregular, indigested piece*," yet there are other eminent scholars, who, it would appear, did not consider such a definition as perfectly correct. JOHN LOCKE, one of the greatest men, of whom Great Britain can boast, and the late Dr. SMITH, of Princeton, have imparted a degree of dignity to the term, not in exact accordance with the generally received acceptation of its import. These may, however, be viewed in the light of exceptions to a general rule. While furnished with the opportunity, permit me to dwell for a moment, with some emphasis, on the meritorious ESSAYS of these celebrated writers. The philosophy of LOCKE has no affinity, whatever, with the infidel philosophy of more recent times. He was a firm believer in the sublime, and inexpressibly important, truths of Revelation; and consequently, a serious and devout Christian. His analysis

of mind, and the index he has given by which to ascertain where its strength may be profitably exerted, and where the depths of profundity present themselves, which its limited line cannot fathom, are calculated to teach its true nature and powers. The perusal of such a work, will necessarily widen the mental horizon of every intelligent reader, and, at the same time, impart a taste for that practical mode of inquiry which is characterized by closeness of research. He advances step by step in his investigations; you are never solicited to adopt his conclusions, but they are made manifest, in the broad and clear light of truth. Dr. SMITH, a countryman of our own, was a man of profound learning, possessing a genius of the highest order. One reason, for entertaining a high opinion of his ESSAY on the causes of the difference of complexion, &c. in the human species, shall be stated. We all have our prejudices; some of which, viewed through the deceptive medium of education and habit, are probably concealed from ourselves.—Amongst these prejudices, there are none, perhaps, stronger or more inveterate, even in Pennsylvania, than those which exist against the unfortunate and injured African. Oh, my country! thou art madly provoking the tremendous indignation of Heaven, by a perilous perseverance in wrong and injustice!

And hast thou then no law besides thy will,
No just criterion fix'd to good and ill?

Futurity is wisely concealed from our view; but of this solemn truth there can be no question,—**VICE** and **OPPRESSION** *will not always go unju-*

ished. Almost unconscious of it, the unjust bias, above alluded to, had in some degree taken possession of my mind; but was, it is hoped, almost entirely removed, by an attentive and thorough examination of his doctrines. He, as well as LOCKE, contemplates true philosophy in the elevated character of a hand-maid to Revelation. One of his leading objects is, to establish, by a course of fair and manly reasoning, the veracity of the Mosaic account of the creation.

When I sat down at my desk, I had intended to consult a few of the pages of our early history, for the purpose of finding some profitable lessons for the instruction of the present generation; but, by indulging a *desultory* propensity, the original purpose has almost been lost sight of. The salutary effect, which results from frequently ascending to first principles, has been long known and acknowledged. There is many a prodigal spendthrift among us, who would do well, in various respects, to imitate the example of his industrious and unostentatious ancestor, from whom he has inherited the means of indulging his extravagant desires. He should remember, that the highest privilege of wealth is to aid the meritorious who stand in need of assistance; and that industry, properly directed, does, even to the man whose necessities do not require such exertion, always bring with it an ample reward. “Health and length of days are in her right hand, and in her left riches and honour!”

The corner stone of this Commonwealth was laid in immutable justice;

and the hands of her founders were never stained by the blood of an Indian. Our primitive annals, therefore, solicit, and will endure, the closest and most rigid scrutiny. The first settlers were plain in their habits, and simple in their manners. They laboured indefatigably with their own hands, and their lives were distinguished by pure morals, and unaffected piety. The blessing of Providence followed them; and their descendants have become a great people. But how long will this prosperity last, should their maxims of economy, simplicity, and temperance, continue to be utterly disregarded? Necessity, it is believed, is at the present time, teaching some of them with effect. WILLIAM PENN, whose amiable and great qualities furnish an opulent subject, on which, if the narrowness of my page did not forbid, I should delight to dwell, was one of those bright luminaries which, at distant intervals, have cheered and irradiated a benighted world.

Thus lovely halegons dive into the main,
Then show far off their shining plumes again.

In conclusion, permit me to relate an anecdote of the great lawgiver, which is traditional, it is true, but, at the same time, direct and authentic. Being on a visit at the house of one of his friends, who resided at GWYNEDD, a Welch settlement, twenty miles from Philadelphia, he remained there during the night. When shown into his chamber, in which there was a considerable quantity of grain, apologies were made to him, and regret expressed, that no better accommodations could be furnished, on such an occasion. With that urbanity and

goodness of heart, for which he was so remarkable, he immediately put to rest every anxiety, which had previously existed, by a single observation: "*I do not wish to see more appropriate furniture in a new settlement; nothing could give me more pleasure.*" It should not be forgotten, that PENN could number among his intimate friends, many of the English nobility and gentry; and had stood, with no infrequency, in the presence of princes, but still his humility and unassuming manners were unimpaired.

FOR THE RURAL MAGAZINE.

THE VILLAGE TEACHER.

How little can be known!

This is the wise man's sigh;—how far we err!
This is the good man's not unfrequent pang!

Wordsworth.

There is no faculty of the mind, of which man is more proud, than of REASON. It is this which most strikingly distinguishes him from the brute creation, to which he owes his empire over the elements, and by which he dares ever to explore the councils of the Deity. The triumphs of reason, however, have chiefly been in the fields of philosophy, and amidst the stillness of solitude, "in regions mild of calm and serene air." In the ordinary pursuits of life, her voice is drowned amidst the clamour of contending passions; and every successive generation of mankind, has to travel over the same course of inexperience and presumption, of error and misconduct, of remorse and repentance. The triumphs of reason in philosophy endure from age to age, and are not only glorious in themselves, but

the means of acquiring new conquests. Those victories, which she obtains over the passions, are confined to the lives, and written in the experience, of individuals. The truths, which it required the utmost capacity of the human intellect to develope, are now familiar to the apprehension of every school-boy : but human nature continues to be as prone to evil, as selfish and untoward, as if the divine Author of our religion had never walked on earth. There is, in this view of the subject, much that may humble the most aspiring intellect. It shows, that the greatest genius affords no exemption from the ordinary weaknesses and vices of our nature, and that the mere force of reason cannot destroy the propensities which for ever drag us down to earth.

Even in those pursuits which are purely abstract, the different degrees of intellect approximate more nearly to each other than we commonly imagine. There are certain brilliant talents which we are apt to regard with a kind of superstitious feeling, and which we suppose to be gifted with an almost intuitive knowledge. Yet, the truth is, that those qualities which most easily attract the vulgar gaze, are fallacious and superficial. The highest and most lasting rewards of fame, have been earned by slow and patient labour ; while the more dazzling career of genius has often terminated in disappointment and obscurity. He who trusts to the mere force and splendour of his talents, will find that they cannot sustain his flight, and that the most brilliant inventions of the human mind fade before the

realties of nature ; that there is no real glory in philosophy, separate from that of truth, and no key which will unlock her treasures, save that of patient investigation. There can be no discipline, better fitted to humble the pride and silence the vanity of man, than that of the inductive philosophy ; for it teaches him that the only disposition of mind, in which he can acquire substantial knowledge, is that of docility to the voice of experience ; and that patience and humility are far more valuable and efficient in a philosopher, than the brightest genius. When Newton commenced the researches that conducted him to an eminence, which no other mortal has attained, it was by careful and unprejudiced observation. He suffered no previous opinion to mislead his judgment, no weak ambition to disturb his mind ; but watched, with untiring patience, for the illuminations of truth. It was, probably, to this careful exclusion of prejudice and vanity, as much as to any other cause, that he owed his wonderful achievements ; for they must have been attained by regular advances, by steps which the meanest understanding is capable of following.

If these remarks are correct as regards philosophical, they are more strikingly so in relation to moral truth. The fabric of philosophy is the work of ages, and its dimensions are as capacious as those of nature ; but the edifice of moral truth can be perfected in the sphere of action, and during the life of every individual. Its foundation is laid by the hand of the Creator in the heart of every intelligent being, and is spoken of in

Scripture, as the rock on which the wise man built, and under the type of a light which has enlightened every man, of a word which is nigh us in our heart and in our mouth. This light may be darkened by superstition, distorted by prejudice, or buried beneath the cumbrous systems of a false philosophy; but can never be totally extinguished. He who would follow its illuminations, and become the votary of truth, must separate himself from these troubled elements of life. He must listen in quiet seclusion to her voice, and acquire, by humble and patient watchfulness, that habitual mastery over his mind, which is the groundwork, and the only foundation, of permanent excellence; and thus will he gradually come to know the truth as it is.

He who thinks to hear her still and small voice amidst the agitations of contending passions, will find himself deaf to its monitions. In our intercourse with the world, and our chase of its glittering phantoms, our interests and desires continually mislead us. We follow their guidance, rather than that of truth; we hurry down the stream of pleasure and business, and make our reason itself the slave of our appetites. There is something in the alternations of hope and fear, in the longings of ambition, and the first flushes of success, that engrosses and fills the mind. But when the zeal, with which we followed some object of unworthy ambition, is spent; when the violence of passion is exhausted, and satiety has succeeded to enjoyment, we sink down into the bitterness of self-reproach and remorse. We then perceive

how fatally we have wandered from the path of reason, and determine, while our passions are spent and asleep, to chain them at her feet. Alas! they will awake, like the tiger from his lair, with the scent of blood in his nostrils, more furious and more powerful from every success.

These loose and general remarks may serve to illustrate the admirable economy of Providence. The truths, which it is important for us to know, are easily comprehended. Those qualities, by the possession of which the great end of our being is to be answered, are within the attainment of every rational creature. By a wonderful law of equality, the difference which appears to exist between different orders of intellect, is scarcely sensible in its effects upon the happiness and virtue of individuals. Brilliant talents, and rare accomplishments, do but expose their owner to more dangerous and subtle temptations, and too often furnish the weapon which destroys the peace of their possessor; while humbler virtues pass along, unconscious of these self-inflicted tortures. The latter pursue, from instinct and choice, that path of humble and quiet action, which the former will find, after all his wanderings, to be the only one that leads to peace, and is lighted by the pure and unwavering radiance of truth.

FOR THE RURAL MAGAZINE.

SEEDS.

From the Plough-Boy's Cottage.

This morning, as I awoke from my slumbers, these words came before me, "Take care what you sow!"

The reflections they have awakened, amidst the wonderings such a salutation of the morning beam has excited, may not prove idle or merely speculative.

The husbandman, when he commits his seed to the earth, conscious of having done all within his power, rests in the goodness of Him who rules these lower elements, for the completion of the work. The white mantle of Nature is thrown over the germs of future sustenance, by the genial breath of Spring ; “the early and the latter rains,” and the vivifying heat of the sun, awaken those germs into beauty, clothe them with luxuriance, and ripen them for the sickle. But the husbandman well knows, that unless he be careful to select seed of the proper kind, and weight and purity, the product, he will reap, will deteriorate in its nature. However good the soil may be, his granary will receive a value proportioned only to his attention to the maxim—

Take care what you sow.

But there are **SEEDS**, whose value is infinitely greater than wheat, or rye, or barley. Give me your ears, ye honest hearts of our rich farms, ye independent men of our beautiful valleys, and let me caution you to *take care how you sow!*

It is recorded, with great truth, that “books, men and things are lying constantly in wait to deceive souls, and bring them to perdition :” and books are here very correctly placed first on the list of deceivers. They are more dangerous, because less suspected ; and the *seeds*, which are sown, by pernicious volumes, in the minds of the young and inexpe-

rienced, in the silence of solitude, take very deep root, and bring forth fruits of vice and corruption. O ! how the spirit of genuine sensibility laments the widely spreading evils, which cast desolation over *fields of beauty !* Beware ! ye noble-minded yeomen, how you admit into your little libraries, these insidious seducers, these *tares*, which grow amidst the tender plants which the **Lord** of the heritage has deposited in the soil he loves, and committed to your charge. It is in your power to aid the growth of the germs of goodness and piety, which may flourish under your fostering care, by the blessing of the great Husbandman, and make your children the glory of our country ! Aim, therefore, at a judicious selection, that the *seeds* you sow may not want either weight or purity ; and then “the early and the latter rain,” which descend *from above*, will mature them into strength and loveliness.

This caution is also peculiarly applicable to those who have the direction of the numerous village libraries, that have latterly arisen in our favoured land. On these men, an awful responsibility rests. They have, in their hands, the future characters of the people, who may live in their respective neighbourhoods. They have, under their care, the *destinies of an unborn race !* The *seeds*, which are now sown in the hearts of the young, will, when they shall become parents, be transmitted to other soils. What an incalculable magnitude and importance invest this subject ! Let them beware, therefore, as they shall answer at a high tribunal. “Take

care,"—said a monitor to the celebrated statuary, BACON, as he tapped him on the shoulder.—"remember, you are working for posterity!"—and the caution was reciprocated to the divine. *Take care*, says the Plough-Boy, to the directors of village libraries, *what you sow!*

Many a lovely damsel, whose rosy cheeks and sparkling eyes once indicated the sweetness and the purity of innocence, has had her heart tarnished, corrupted, ruined, by the insidious poison of books,—books read in secret, remote from the vigilant eye of a tender parent or kind friend. Into the recesses of the solitude of these; yes, even at the hour when the remainder of the family is reposing in peace, and when the rays of the midnight lamp are thrown on the idle, the romantic, or vicious page, let the warning voice of the Plough-Boy enter. May his accents thunder in their ears, *Take care how you sow!*

The vast increase of *taverns*, in our country and villages, calls us to beware of *men*, as well as of books. There is a great difference, my father tells me, between the simplicity of manners, which characterized the times when he was a boy, and the idleness and dissipation which have now spread over the country. Then it was considered a *disgrace*, to a young farmer, to be seen at a tavern, excepting when absolute necessity called him thither. Now, visit one of these seductive inns, in an afternoon, and we can see a band of hardy striplings, smoking their segars, drinking their cans of beer, or tossing off their glasses of "real Hol-

land," and permitting their minds to be agitated by the evanescent politics of the day, while their families are either ignorant of their habits, or mourning over the tares, which the enemy is sowing in a fruitful field. Alas! even in his time, the Plough-Boy has witnessed the robust young husbandman, graced with an athletic form, adorned with vivid health and manly beauty, and blessed with a lovely wife and innocent prattlers, sink into an early grave, opened by Infamy and closed by Despair, solely in consequence,—first, of suffering his mind to be led aside from his business by the solicitations of idle men, and losing his precious time at the tavern; and then, of "*just taking a social glass*," which they have told him it would be unmanly to refuse.

Beware, my youthful companions, of these *first*, and apparently insignificant steps in idleness. No man suddenly becomes wicked. The power of habit is enlisted on the side of virtue, until its barrier be broken down by repeated *small attacks*; and he, who in former times could indignantly exclaim, "*Is thy servant a dog, that he would do this thing?*" yet committed the very evils at which an exalted spirit had shuddered with terror. *Take care, ye young noblemen of Nature! how you sow.*

Various other incitements are widely spread through our country, to lead men to sow seeds of vice and ignominy in their fields. It becomes not the Plough-Boy to enter too much into detail. The evils are abroad, and walking their desolating course; and he who can, in the hour of solitude, yield his mind to the dominion

of reflection, will be at no loss to discover the peculiar inducements to idleness or dissoluteness, in his own vicinity. To all, therefore, who value the *seeds of immortal beauty*, let the warning voice of the Plough-Boy of the valley, reach with effect; and the gentle salutation of the morning ray, which visited his own spirit, may not have been sent without an instructive purpose. To all, this lesson is deeply interesting; for the happiness of the long, long ages of eternity, depends upon it. "Whatsoever a man shall sow, that will he reap. If ye sow to the flesh, ye shall reap corruption; but if to the spirit, the life which is eternal."

Downington, January 29, 1820.

FOR THE RURAL MAGAZINE.

"IS IT PEACE, JEHU?"

The evanescent sorrows of infancy have faded from the recollection, the flowery scenes of childhood are passed, the thraldom of pupilage is over, the fetters of minority are dissevered, and Youth steps boldly on the threshold of life, proud of the superiority, and conscious of the attributes of MAN.

"The world is all before him where to choose."

Society courts him to the enjoyment of rational and of sensual pleasure. The anticipation of evil finds no place in his imagination. All of friendship is faithful, and love pure as attractive. A short career in the busy round of existence, while it proves the fallacy of some of his crude conceptions, only affords a confirmation of others. If trusted friendship discover its instability, or cherished love

its inconstancy, still Fancy promises, in other fountains, the unadulterated source of happiness. He looks not to the mind to supply the vacuum they have left. Youth is not the season for reflection. Fame has not yet animated the daring spirit of enterprise, and the social circle and the midnight revel display all their attractions. Lost in the whirl of inebriating delights, Reason maintains but a divided empire. But let her "still small voice" be heard in the intervals of passion, and will it not whisper to his heart, *Is it peace?*

The bowl has ceased to exhilarate; this species of excitement is happily relinquished, and, in the active scenes of business, he finds a stimulant to exertion and enjoyment. The acquisition of wealth will enable him to astonish the world with his magnificence; or, if a more worthy motive prevail, will furnish the means to relieve indigence, extricate virtuous misfortune from the fetters that chain it to the earth, and wipe the tear of want from the eye of the widow and the orphan. Glorious reward for days of toilsome industry. How soon may he find some more sordid spirit grasping the object that eludes his pursuit, and the anguish of disappointment displace the glowing visions of his fancy. While the strife of hopes and fears drive repose from his pillow, when the howling of the wind reminds him of the instability of that element on which he has adventured many a *rich argosie*, it would be mockery for him to ask of Care, *Is it peace?*

Fortune, however, while she laughed to scorn his dreams of princely

splendour, has deigned to crown his days of anxiety with competence, and Philosophy bids him be content. He chooses a partner of his joys and sorrows, and sees a hopeful progeny around him. Once more Fancy spreads the glowing landscape of the future to his eye. Through these dear ones, whose infantine pleasures now amuse his paternal mind, he will attain the object of his hopes. His daughters shall wed with the first families that now tower above him; his sons—

"Visions of glory spare his aching sight;"—

he eagerly anticipates the moment of their matured existence, when he shall exultingly exclaim, in the fulness of his heart, after the detail of their unrivalled achievements, I AM THEIR FATHER. A few years roll away; the fiat of Omniscience is gone forth, and all, but one, of those that but now cheered his domestic board, are gathered into the garner of eternity. That one, the first—the last—remains his only comfort. On that loved one, he, and the beloved partner of his afflictions, bowed down with sorrow rather than with years, now place their only hopes. He will support their tottering footsteps; he sooth the sorrows and smooth the pillow of their wanng age. Alas! the haunts of dissipation receive him; premature infirmities, racking pains, palsied limbs, hasten him, with rapid and unerring steps, to the grave—and all beyond it. It were in vain to ask of his agonized bosom.—agonized by the conviction of his fatal paternal indulgence,—Is it peace!

Is not the quiver of affliction exhausted? One shaft is left. That

dear mourner, that has partaken so largely of the cup of his sorrows, cannot sustain the recollection

"That such things were, and were most dear to her." Silent and uncomplaining, she bows before the storm. Her ashes rest with those of her children. Where is now that eager spirit, grasping at phantoms, and soaring into the regions of uncreated imagination. Hope is extinguished in his bosom; his soul is black with the very midnight of despair. Frail man! Didst thou ever ask, *Of whom did I receive these precious gifts?* Bow before the throne of Omnipotence; bless that Power who gave and who took away; pray to him for resignation; and, when the spirit of vital religion pours its holy influence into thy heart, thou needest not ask of thyself or the world, *Is it peace?*

FOR THE RURAL MAGAZINE.

*Letters of a Citizen to his Friends
in the Country.*

No. III.

If the form of government with which we are blessed, is to be durable, it will depend upon the *virtue and intelligence of the people*. Ignorance and vice cannot sustain a republican system. It becomes, therefore, a duty of the highest order, to spread practical learning over every mind, and cultivate piety in every heart. To do this, the establishment of good schools, on the plan suggested in my last letter, is of great importance. But other means are also to be employed. Parents, guardians, and masters, should discharge their duty toward those who are entrusted

to their care, by judicious advice and good example, for the conduct of life. The domestic circle ought to be regarded as a *moral garden*, under the especial care of the head of every family. Here he may plant good seed, and this he is bound to protect from all pernicious weeds. Let him therefore frequently examine the premises; he cannot be too assiduous, and vigilant. In this particular department, more is to be accomplished, than many are disposed to admit. And if ever our condition as a people is improved, in the degree to which it is susceptible, it will owe much to judicious *family discipline*. In the city, as well as in the country, we have been too relax in the performance of these manifest obligations. Private happiness and the public welfare are intimately connected with the minute government, and careful training, of the minds of youth.

Among other auxiliaries, I would take the liberty to recommend the establishment of libraries, to be composed of useful books. These might be located in the school-houses of each neighbourhood, and the teacher should be appointed to the care of the establishment. In the country, it is customary to assemble but once, in the day assigned, for social worship; in the afternoon of that day, the library might be opened for the delivery and reception of books. How much better would it be, to witness the people passing, in an orderly manner, to, and from the library of the vicinage, than assembling at taverns, or employed in idle and pernicious sports, on the evening of a day, set apart by Christian professors, for the

worship, which is publicly due to the *Sovereign of the world!*

You may suppose, fellow citizens, that these suggestions are the offspring of a visionary brain; but the period is coming, with no tardy step, when sound morals and undefiled religion will be found to be the best estate. Men and governments prosper solely in proportion as they are regulated by principles which God approves. It is idle, in the last degree, to expect prosperity from any other source. All history, sacred and civil, teaches but one lesson; **VICE AND IGNORANCE CONDUCT NATIONS TO THE TOMB!**

This epistle is shorter than I had designed it to be; various avocations have claimed my attention. I have only to solicit your attention to the subjects submitted in it to your notice, and to assure you of my good will.

CIVIS.

Treatise on Agriculture.

SECT. II.

of the actual state of Agriculture in Europe.

8. *Holland*, though essentially commercial has, from causes rarely occurring, become also highly agricultural. To the descendants of Dutchmen, the following description of her industry, in this respect, cannot but be acceptable. It is from the pen of an excellent judge and faithful narrator.*

“ Their rotation of crops, always begins with the culture either of some leguminous plant or profitable root, and generally with the potato,

* M. Yoarst, professor of agriculture at Elfort. See his introductory address to his class, in 1806.

as the best preparative of the ground. Whatever may be the grain which follows, whether wheat, rye, &c. &c. it is generally sown with *red clover*; and where it is not, the stubble is ploughed in immediately after harvest, and a crop of turnips taken and either consumed on the ground or housed for the winter. A single department (that of Zealand) obtains by the culture of madder alone, an annual profit of six millions of florins; while that of Brabant boasts its twenty thousand bee-hives; in a word, this commendable nation, upon an extent of surface not exceeding seventeen hundred square leagues, (the greater part of which has been redeemed from the ocean) counts two hundred and forty-three thousand horses, seven hundred and sixty thousand horn cattle, about a million of sheep, from ten to twelve thousand goats, four hundred and eighty-nine thousand hogs, and about three millions of poultry, of every species. Their stock of manure is necessarily great, and is both well understood and well managed."

9. The same causes, physical and moral, operate against the existence of a productive agriculture in *Denmark* and *Sweden*—severity of climate, poverty of soil, and vassalage of tenants.*—Their resources are also alike, and exist principally in manufactures and commerce, and in mines, forests and fisheries. The former boasts fine pasturage and cattle, in Holstein.

10. Under the common name of *Germany*, we include Prussia, Saxony, Austria, Wurtemburg, and Bavaria, and shall say a few words of each, calculated to give a general idea of their husbandry. It was not to be expected that the great Frederick of *Prussia* (so devoted to na-

tional glory and strength) would disregard the interest of agriculture; and the less so, as in theory he considered it "*Les mamelles de l'etat.*" We accordingly find him employed in draining marshes of great extent,* in filling them with industrious colonists, and in converting barren sands into fertile fields, by placing his capital in the midst of them. But amongst these good works, he forgot that the *hands of the labourer, to be efficient, must be free*; he found the peasants slaves, and left them such.

"The Saxon peasant, on the other hand is *free* and protected by the law; he holds his farm on lease, which he sells or transmits to his children at will: and *this* is the principal cause of the flourishing state of Saxon agriculture. In Lusatia, a different legislation produces different effects; but for some years past, the government and great proprietors have concurred in changing the *vassalage* of the peasants into a *mild and salutary dependence*. Saxony is remarkable for its grain products, and Lusatia for its stock—the latter counts four hundred thousand head of sheep of the merino race.

Geographers give to *Austria* and her dependencies 1965 leagues in circumference. In a surface like this, there is necessarily a great variety, as well of climate as of soil; but in general, both are favourable to agriculture. "In the districts of the Inn, of Lower Stiria, of Istria, and of Carniola, the land is of good quality, well cultivated and very productive. In the last, they have two crops in the year; sowing buck-wheat on wheat or rye stubble, and millet on that of hemp and flax.—They everywhere cultivate Indian corn, and in

* To give to despotism the air of freedom, the *servs of the crown* were liberated at the revolution—but the example was neither approved nor followed.

* In the *Dollart* what was lost by the sea was regained, and the marshes on the *Netz* and the *Wart* at *Friedburg* and in *Pomerania* were drained, and the country rendered habitable.

Styria (as in Virginia) it forms the ordinary bread of the country." In Bohemia, Moravia, and Galitia,* the soil is uncommonly rich, and under proper management would be very productive. Austrian Silesia is less fitted for the production of grain, but excels in forage and cattle. Hungary, Transylvania and Croatia, abound in every species of agricultural produce. Their flocks and pasture are not inferior to those of the Ukraine; and wheat, buck-wheat, Indian corn, millet, rice, hemp, flax and tobacco, yield immense harvests to very small degrees of labour. Yet is agriculture far from being in a flourishing condition!—Writers on political economy ascribe this fact principally to two causes—

1st. The degradation and oppression of the labouring part of the community; and

2d. The want of convenient commercial outlets for the produce of the soil.

We shall find in Hungary a striking illustration of the correctness of this opinion. "The *Populus Hungaricus*," is divided into four estates, the magnats, the nobles, and the clergy, who possess all the lands, and the "*misera contribuens plebs*," who (besides tythes, rents and corvees) pay all the taxes. This wretched populace is composed of the burghers and the peasantry, of which there are three kinds—*slaves for life*, *temporary slaves*, and a third sort called *liberæ emigrationis*, who, as their name indicates, have loco motive powers and rights. Of the condition of this people, since the year 1764, (and before that period it was much worse) we may form an idea from the edict of Maria Theresa, called the *urbarium*, or law of contracts between landlord and tenant, by which it is declared, that corporal punishment (inflicted by the master for insolent words or conduct) shall not exceed

twenty-four strokes with a cane for a man, and the same number with a switch for a woman. Nor is the *commercial* condition of this people better than the *civil*; they are not only obliged to take from Austria many things which they could have had in other places of a better quality and at a lower price, but they are also compelled to carry to Vienna the products of their own soil and labour, where their sale is embarrassed and their value lessened by heavy and oppressive taxes. The same remark applies to Galitia, whose natural outlet is the Vistula, or the Nieper; but of these she is not permitted to avail herself, and, like her sister kingdoms, is compelled to seek the markets furnished by the Danube and Trieste. "The consequences are obvious—the tenant works only to satisfy hunger, and the landlord is satisfied with little more than "*victum et vestitum*."*

The amount of lands annually cultivated in *Bavaria*, is one million one hundred and sixty-five thousand acres, which produce about six millions of bushels of grain, of which two millions are surplus. The Palatinate, (one of the dependencies of Bavaria) is also very productive. The route between Heidelberg and D'Armstadt, called the *Bergstrass*, traverses one of the finest districts of Germany, and perhaps of Europe; where are seen extensive vineyards, vast meadows and fertile fields, producing wheat, barley, tobacco, madder, rhubarb, turnips, &c. &c. In the year 1799, all the electoral possessions within the circle of Bavaria, contained 199,000 horses, 160,000 oxen, 465,000 cows, 961,000 sheep, 320,000 hogs, and 378,000 goats. Yet are the Bavarians, compared with the inhabitants of the north of Germany, half a century in the rear. The people are extremely ignorant and fantastical: like the people of Rome

* Geographic Math.

* Geog. Math. vol. 4. art. Hungary.

and Lisbon, they sacrifice much time to processions and fetes, and like them also are slaves of the vilest appetites. Debauchery is no where more flagrant than in Munich.*

Wurtemburg is ranked among the most fertile and well cultivated countries of Germany. The mountainous parts produce potatoes, oats, hemp and flax; the less hilly abound in wheat, spelts, rye, buck-wheat, Indian corn and barley; and in the valleys we find tobacco, madder and vineyards, in which the grapes of France, Cyprus, and Persia succeed perfectly. Apples, pears, &c. are of common product and excellent quality †

11. It has been justly remarked, that to know the state of husbandry in any country, you have but to examine the *instruments* employed, the *succession of crops*, and the *condition of labourers*.—Tried by these tests, the agriculture of *Russia* will be found to be in a state of great degradation.—The plough (called *sokha*) which is commonly used, is very light, of simple construction, and but calculated to enter the ground *one inch and a half*; the *harrow* consists of one or more young pine trees (whose branches are cut off about eight inches from the stem) steeped in water to add to their weight, and tied together. With such miserable instruments, each drawn by a single horse, the farmer scratches the ground, and without always covering the seed, which is no doubt the reason that in dry seasons their harvests are very bad.‡ In the best soil their *succession of crops* is of *eight years*—two in barley, two in oats, two in winter rye, and two in spring rye. Lands of less fertility are sown *two years out of three*, and mountainous tracts one

year in three, when they are abandoned to weeds until rest shall have reinstated them. “To manure them would, in the opinion of a Russian peasant, make them poorer;* and therefore he suffers his dunghill to accumulate into a nuisance, while he goes on to clear and exhaust new fields.” “The grains raised are rye, spelts, barley, millet and oats, which, from want of sufficient roads and markets, are often low priced; as are horned cattle and horses: an ox selling for a ruble and a half, a cow for one ruble, and a horse for three rubles.”† To this wretchedness we must add, (what perhaps occasions much of it) that throughout the *civilized* part of Russia, the labours of agriculture are performed by *slaves* confounded with the soil, and bought and sold with it. In a great portion of the northern section of this vast empire, agriculture is unknown; and the chase, the fisheries, cattle and rein-deer, furnish the only means of subsistence.

(To be continued.)

Mr. Nicholson's Prize Essay.

On a Rotation of Crops, and the most profitable mode of collecting, preserving and applying Manures.

(Communicated to the Albany County Agricultural Society.)

[CONCLUDED.]

Of manures which may be termed fossils we will mention the various kinds of calcareous substances, the stony matter called pyrites, coal, salt, peaty substances, silicious and aluminoous earths. Limestone, gypsum, chalk and marble, are the calcareous substances we shall notice, and each in their order.

Limestone, (carbonate of lime,) has

* Geog. Math. &c. art. Bavaria. Compare the productiveness of Bavaria with England—the comparison is in favour of the former.

† Idem.

‡ Pallas, pages 3 and 4. vol. 1.

* Pallas, vol. 5. page 60.

† A ruble is equal to 5 livres, or 1 dollar Spanish.

always more or less aluminous or silicious earth in its composition. Frequently also it contains magnesia. Limestone of this latter description, when calcined, makes what the English farmers call *hot lime*, which is more powerful in its effects, and therefore less of it should be applied at once to the soil. That without any mixture of magnesia is considered more durable in its operation, but less powerful. Magnesian limestone is known by its effervescing but little when plunged in nitric or other acid, while limestone that is not magnesian, when thus immersed produces a strong effervescence. The magnesian, also, when immersed in diluted nitric acid, or aqua fortis, renders the liquid of a milky appearance. It is usually of a brownish or pale yellow colour. Being more caustic when calcined, than common limestone, it is more efficacious in decomposing peaty earths, and is best adapted for soils which have too much either of peaty or vegetable matter in them.—Where lands have been injured by too plentiful an application of this lime, peaty earth should be applied to them to correct the evil.

The trials of lime in this country have been quite limited, and confined mostly to the middle states, particularly Pennsylvania. It has usually been applied there at the rate of about forty bushels to the acre; but whether the lime used there is magnesian, we have never understood. Lime may be applied as a top dressing or mixed with the soil. Its application has been found most successful when the first succeeding crop was Indian corn; afterwards wheat is grown to advantage. Instances are mentioned in the memoirs of the agricultural society of Philadelphia, where gypsum had no effect on worn out lands till they were first manured with lime.

British writers say that lime may be applied with equal advantage ei-

ther when newly slaked or afterwards, that its effects are not always the same particularly where soils are different, but that usually it is a very durable manure. A much larger quantity is, however, applied in Great Britain than has been usual here; but perhaps the coolness of the summers there renders more requisite. We pretend to advise to no particular rules in the application of lime in this country, farther than that about forty bushels to the acre be first tried; but less for sandy soils, and perhaps more for those which are stiff clays would be advisable. In clays of this description, lime is particularly useful in destroying the adhesive quality of such soils, and thereby rendering them a more friable loam. Such has been its effects on the clay lands which abound so much in England. Where the lime is magnesian, let trials be made of about twenty bushels to the acre.

That country abounds much in the calcareous matter denominated chalk, which is also converted into lime by calcination, and used as a manure. It forms a weaker sort of lime. As this substance, however, is hardly to be found in this country, it will be unnecessary further to speak of this manure.

Gypsum, (sulphate of lime) is a most powerful stimulant to the growth of many crops in all dry soils in this country, but with the following exceptions: it has no sensible effect on lands newly cleared, on those in the vicinity of the ocean, nor on those which have been completely exhausted by severe cropping. In soils of this latter description, some pabulous matter must be given them for the gypsum to digest or act upon; and this may be a previous manuring with lime, marl, bog-earth, barn dung, or perhaps any substance that is calculated to improve the condition of the soil. It should also be observed that the application of gypsum frequently fails entirely of produc-

cing its effects if followed by uncommon drought, or unusually wet weather. It is generally most powerful when applied to growths of leguminous plants, to those extending in vines, such as the various species of the gourd tribe, the strawberry, &c. and to several sorts of the green crops, particularly potatoes, clover-grasses, lucern, &c. On fibrous rooted grasses, and those grain plants most nearly related to them, such as wheat, rye, oats, barley, &c. It has no sensible effect when applied as a top dressing to the growing plants. On Buckwheat it is very powerful, and for Indian corn it is also valuable. Judge Peters, (of Penn.) whose experience of its uses has been long and extensive, says that although he has found this manure of little use to many sorts of plants, when applied to them as a top dressing, yet he has invariably found that all plants derive benefit from their seeds being rolled in gypsum, after being soaked in some liquid, before sowing or planting. As a manure, however, for wheat or grain crops of similar kinds, immense benefit may be derived from it by applying it to the sward, as a top dressing, a suitable length of time before the ground is broken up. In this way two bushels of gypsum may be made to give an additional increase of eight or ten bushels of wheat to the acre. Take, for instance, land which in its natural state, and with the usual culture, will only yield ten bushels of wheat to the acre; in the fall or early in the spring, give it a top dressing of two bushels of gypsum to the acre; by the middle of June following, the land will exhibit a fresh green sward, principally of white clover; and when land is thus clothed in verdure, it is a sure indication of a great addition to its fertility, and that a good crop may then be expected. When, therefore, the green sward is thus formed, turn it under, and then, with the usual culture, twenty bushels of wheat to the

acre may be expected, where only ten would have been had without this previous enriching of the ground by the application of gypsum. Yet the same quantity of this manure, applied as a top dressing to the growing crop of wheat, would have had no sensible effect. It should therefore be understood, that for all growths which derive little or no benefit from gypsum, when applied as a top dressing to the growing plants, the ground should be previously enriched by applying this manure to the sward, a suitable length of time before it is to be broken up, which length of time will usually be from two to three months. At all events as soon as the sward fully exhibits the effects of the gypsum it may then be turned under. Wherever a sward is to be turned under, this practice should be invariably pursued in order that the ground be rendered more fruitful for the crop that is to follow.

In this country gypsum is a great source of wealth, wherever soils are sensible to its effects. It has tended much to equalize the value of lands, by imparting an artificial fertility to those naturally more sterile, and that at a small expense.—But gypsum alone is by no means a sufficient source of dependence as a manure for keeping lands in the improved condition that is necessary for raising the best crops, and of course deriving the greatest profits. The farmer should attend also to making the most of such other manures as come conveniently within his reach. We are, however, no advocate for obtaining manures at any price; they may cost too much; but almost every farmer whose lands are of suitable quality, and who stocks them with as many cattle as he can keep in good order, and then makes the best use of the manure they afford, may usually, with this supply, and with the judicious use of gypsum, added to good culture, keep his lands in an improving condition.

But some soils are so constituted as to be of diminished value without a suitable mixture of other earths than those of which they are composed, and in such case are permanently benefited by such additions of earthy substances. If lands, for instance, are too sandy, or gravelly, the addition of clay to them, or what is better, of upland marle, will permanently improve the soil; and where these earths can be found within reasonable distance it will usually be labour well expended in making such applications. We will state a case in point. In the rear of the city of Albany lies an immense body of calcareous earth, which may properly be called a schistic marle. It is commonly called blue clay. This, when mixed with a due proportion of sand, forms a very fertile and durable soil. Farther west of the city lie large tracts of sandy lands, which require suitable proportions of this marle to render them fit for good culture, and with such additions much of them would be found very valuable. Where they lie sufficiently level, and are not too sandy, it will probably be found that from half a ton to a ton for every rod square would be sufficient to render them very fertile, and fitted for the most profitable rotations of crops.

This sort of marle, which may be found in various parts of the country, and very frequently under tracts of sandy lands, is a very valuable and permanent manure in all dry soils which are deficient of calcareous matter, and have not already too great a proportion of clay in their composition. This manure should be laid on the land as a top dressing, in order that it may be completely pulverized before it is mixed with the soil.

Upland marle is sometimes found of silicious texture, in which case it is good for stiff soils, as well as for others. It is also found of different colours, when combined with argila

ceous matter, and of different qualities; that containing most lime or calcareous matter being always the best. Marles of this description are often very valuable in forming a principal ingredient in composts, of which we shall presently speak, and the same may be observed of the superior sorts of this manure found in bog swamps, of which something shall now be said.

This sort of marle is found, at greater or less depths, beneath the surface of many bog swamps, and is of a whitish, a greyish, or a brownish colour. The whitish is the most powerful, having most lime in its composition; the greyish is next in quality. The super stratum is either a bog earth, to wit, vegetable matter totally decomposed; or it is a peaty substance, or vegetable matter in a partial state of decomposition. The bog earth is good manure of itself, and may be used separately, or mixed with the marle; the peaty substance must undergo a further decomposition before it is rendered valuable as a manure, it being then rendered similar to bog earth. These manures when applied to growing crops are somewhat similar in their effects to those of gypsum. They are valuable as top dressings, or for mixing with the soil. Their effects are very powerful on Indian corn, and they are more or less valuable when applied to almost every sort of upland crop, with the exception of wheat, rye, barley, &c. For these they are to be applied to the sward, a suitable time before breaking it up, as has been mentioned in regard to gypsum. It should, however, be observed, that neither decomposed peat, nor bog earth, should be applied to soils which already contain too great a proportion of decomposed vegetable matter.

The condition of clay soils is also permanently improved by mixing a due proportion of sand in them. The most durable and perfect soil is

chiefly composed of certain proportions of sand, clay, lime, and vegetable matter in a state of decomposition, and, whenever any soil is destitute of a due proportion of any of these, the addition of such earthy substance can never fail to serve as a manure.

The stony earth called Pyrites, when pulverised by the aid of a proper degree of calcination, is much used, and highly esteemed in Flanders as a top dressing for grass lands, as is mentioned in a communication of the late Chancellor Livingston to the Society for the promotion of the useful arts in this state. We will refer the reader to the 2d vol. published by that Society for the manner of preparing this manure, and the quantity to be used, &c.

Of coal, we shall merely state that, from the results of experiments made by the late Mr. Muhlenburg, (of Penn.) about 40 bushels to the acre of this substance, pulverised in the manner of gypsum, was found a good manure, when applied as a top dressing.

Common salt, pulverised, and applied as a top dressing, at the rate of from two to four bushels to the acre, has, in many instances, powerful effects as a manure. Sea-water is peculiarly adapted for this purpose. Mr. Deane, in his Farmer's Dictionary, mentions an instance where a crop of potatoes, and another of flax, were greatly increased in product by an application of sea-water to them while growing. About a pint of the water was applied to each hill of potatoes, and for the flax crop the water was sprinkled over the ground

Some trials have been made in this country of using burnt clay as a manure, and its use is recommended, particularly for all dry arable lands, not inclining to clay. The first step in preparation for burning clay, is to have a considerable quantity of this earth dug up in spits, and laid to dry in the sun: when pretty well dried

you prepare for burning by raising a little pile of dry wood in the shape of a pyramid, say 4 or 5 feet high; —round this you build up the dried spits of clay, leaving a hole at the bottom, for the entrance of the air, and another at the top for it to pass off. Such, at least, was the method formerly practised in Great Britain, but the modern improvement of retaining the smoke within the mass, agreeably to the plan spoken of by Mr. Cobbett, for burning earth, ought also to be pursued in burning clay. After the fire has been set to the wood you continue digging up fresh clay and piling it around and over the heap, as fast as the fire penetrates the mass, taking care, however, not to pile on so much at once as to extinguish the fire. If there be danger of its becoming extinguished, it may be advisable to make one or more holes in the sides of the heap by running a hole into it. The fresh earth is to be added during pleasure or until a sufficient quantity is burned. After the heap has cooled it is fit for use, either by mixing with the soil as directed by Mr. Cobbett, for applying burnt earth, of which we will next speak.

By a late improvement, earths, other than those of clay, are successfully converted into good manure, by the process of burning. It is effected by retaining the smoke within the mass of earth while in a state of ignition. Mr. Cobbett says he has tried this manure for the ruta baga crop, and found it as efficacious as barn dung. His manner of preparing it, and which we believe would also be the best method of preparing burnt clay, is as follows:

"I make a circle," says Mr. C. "or an oblong square. I cut sods and build a wall all round three feet thick, and four feet high. I then light a fire in the middle with straw, dry sticks, boughs, or such like matter. I go on making this fire larger and larger, till it extend over the

whole bottom of the pit or kiln. I put on roots of trees or any rubbish wood, till there be a good thickness of strong coals. I then put on the *driest* of the clods that I have ploughed up round about, so as to cover all the fire over. The earth thus put in will burn. You will see the smoke coming out at little places here and there. Put more clods wherever the smoke appears. Keep on thus for a day or two. By this time a great mass of fire will be in the inside. And now you may dig out the clay, or earth, any where round the kiln, and fling it on without ceremony, always taking care to *keep in the smoke*; for, if you suffer that to continue coming out at any one place, a hole will soon be made; the main force of the fire will draw to that hole; a blaze like that of a volcano, will come out, and the fire will be extinguished.

"A very good way is to put your finger into the top of the heap here and there; and if you find the fire *very near*, throw on more earth.—Not *too much at a time*, for that weighs too heavily on the fire, and keeps it back; and, at *first* will put it partially out. You keep on thus augmenting the kiln, till you get to the top of the walls, and then you may, if you like, raise the walls and still go on. No rain will affect the fire, when once it is become strong.

"The principle is to *keep out air*, whether at the top or the sides, and this you are sure to do, if you *keep in the smoke*. I burnt, this last summer, about thirty wagon loads in one round kiln, and never saw the smoke at all after the first four days. I put in my finger to try whether the fire was near the top; and when I found it approaching, I put on more earth. Never was a kiln more completely burnt.

"Now, this may be done on the skirt of any wood where the matters are all at hand. This mode is far preferable to the *above ground* burning in *heaps*. Because in the next

place, the *smoke escapes there*, which is the finest part of the burnt matter. *Soot*, we know well, is more powerful than ashes, and, soot is composed of the *grossest parts of the smoke*. That which flies out of the chimney is the best part of all.

"In case of a want of wood where-with to begin the fire, the fire may be lighted precisely as in the case of *hauling and burning*. If the kiln be large, the oblong square is the best figure.—About *ten feet wide*, because then a man can fling the earth easily over every part. The mode they pursue in England when there is no *wood*, is to make a sort of building in the kiln with turfs and leave air holes at the corners of the walls, till the fire be well begun. But this is tedious work; and is in this country wholly unnecessary. Care must, however, be taken, that the fire be well lighted. The matter put in *at first* should be such as is of the lightest description; so that a body of earth on fire may be obtained, before it be too heavily loaded.

"The burning being completed, having got the quantity you want, let the kiln remain. The fire will continue to work, until all is ashes. If you want to *use* the ashes sooner, open the kiln. They will be cold enough to remove in a week."

A practice has long prevailed in Europe of paring and burning soils for the purpose of improving their texture and increasing their fertility. On clay lands, and such as contain too much vegetable matter, we conceive the process might be advisable if not too expensive. Its effect on clays is to destroy the adhesive quality of the soil, as the earth burned becomes rather of a silicious texture; and at the same time the surface is much enriched by the operation. In the other case it is calculated to reduce the redundancy of vegetable matter, as well as to enrich the soil. The operation is performed in the following manner:

When the ground is in a good sward of grass let it be carefully turned over with the plough, the irons of which should be well sharpened. Let the plough run about three inches deep.—Then cross plough with a very sharp coulter, and the sward will all be cut into squares of about 10 or 12 inches. You then proceed to set these square chunks up edge-ways, by leaning two together, in which situation they will soon dry.—When well dried build a part of them up in the form of little ovens, and let this be done at the distance of about every 18 feet each way. These are all to have a little opening or door, at a common windward side, for the air to enter, and another opening above for the smoke to pass off. On some dry day when the wind is fair for blowing into the holes below place some straw or other dry rubbish into the holes and set fire to it. As soon as the fires have got fully going in each of the heaps, let the holes in the tops be stopped up, for the purpose of retaining the smoke, and keep gradually building up the heaps as the fire penetrates them, until all the chunks of earth are piled up round them; and when the heaps have fully burned and sufficiently cooled, they are to be evenly spread over the ground, and ploughed in.

In some parts of Great Britain it has been the practice to burn peat earth, in a manner very similar to that before described for burning clay, and the ashes thus obtained from the mass were used for top dressings; but we believe this practice has mostly given way to that of rotting or decomposing peat in compost, the method of which is as follows: you form the compost heap of about one half of peat, a fourth of lime, and a fourth of barn dung, and these substances are to be separately laid along in a manner most convenient to be afterwards thrown into the compost heap in their proper proportions. You commence at one end with spread-

ing a layer of peat on the ground, say, ten feet square and four inches in depth; then a layer of lime on this and another of barn dung, each two inches thick; then another layer of peat, as before, and then the lime and barn dung, as before, until in this way the heap is raised about four feet high, and let the last layer be of peat: then commence another ten feet square along side of this, and raise it as before, till you raise it to the same height; then with another ten feet square, at the end of this mass, and so on, till the heap is completed. After the heap has stood a while, it will heat, and when the heat begins to subside, you commence again at one end of the heap and cut the whole down to the bottom, with the spade, and form a new heap, throwing the exterior parts of the heap, thus cut down, into the middle of the other. A second heating of the mass will then commence, and when that subsides, the peat will be found sufficiently decomposed, and the whole an excellent mass of manure.

In this country peaty substances are usually to be found in morasses; as the superstratum of marle, as before-mentioned; as the principal ingredient of the salt marshes contiguous to the ocean, and as the superstratum of tracts of cold lands which are covered with growths of evergreen trees.

In making composts with upland marle, before-mentioned, the proportions of the marle, with that of the lime and dung, may be similar to those just mentioned for the peat composts, or perhaps the marle may be in greater proportion. The layers of each may be as before described, but the heap only raised to such height that it may be cleft down to the bottom with the plough, then thrown together in a ridge again with this implement; and let these operations be repeated, at intervals, till the whole becomes well mixed, pulveris-

ed, and in a state of fermentation, when it is fit for use, and should be immediately applied to the soil in the manner before-mentioned.

The use of wood ashes as a manure, is well known. It is good for almost all crops, and is to be used as a top dressing. It is much more efficacious as a manure in some parts of the country than others, particularly on Long Island. It is most valuable on light dry soils, particularly those which are sandy. Soot, as a top dressing, is much more valuable than ashes, and is proper for almost all arable lands. It is most efficacious when well pulverised before its application.

The dung of fowls of every sort has much calcareous matter in it, and is very efficacious, applied as top dressings. Malt dust is good in the same way—40 bushels of it is a proper allowance to the acre.

Night shade should be mixed with earth, say, two thirds of the latter to one of the former, and in the course of a few months it forms an excellent manure. In most European cities this excrement is carefully collected, for manure, while in this country its use has been neglected.

Many liquids are furnished from every domicile, and particularly the kitchen, which, mixed with earths, and other substances, would form valuable masses of manure. The liquids to which we principally refer, are the soap-suds, dish-water, brine of meat, urine, &c.; these should all be preserved, by being absorbed in rich earthy substances, together with the contents of the hog-sty; and in this way a large heap of good manure may be made that is commonly lost for want of attention in saving these ingredients.

FROM THE RECORD.

Agricultural Education.

No cause has more retarded the progress of education in the agricul-

tural part of the community than a mistaken opinion, in regard to the use that can be made of it.—That the advantages of learning, in every state of society, should not be appreciated by the grossly ignorant, is not to be wondered at; but that men well informed on many subjects, should fall into the vulgar error of denying the advantages arising from extensive knowledge is really surprising.

We hear it frequently observed by farmers, who have sons to educate, that they intend such a one to follow his own occupation; and it will be necessary that he should be taught to read, write, and cypher to the “Rule of Three.” Now it is believed with these *extensive* acquirements, a farmer will be able to keep his accounts tolerably decent; to estimate the amount of any number of bushels of grain, at a given sum per bushel: but I shall forbear to mention all the advantages which this kind of knowledge may confer. The intelligent farmer well knows it has a boundary, and a very limited one too. To endeavour by force of reason to induce this class of farmers to abandon their errors, would be time spent to little purpose; their minds are not recipient for truths which lie beyond the narrow boundary of their learning.

It is to the enlightened and public spirited yeomanry of our country, that we are to look for a change in the education of our youth.—Change, did I say? Rather an entire new system of education. I ask this class of farmers if they have any such a thing as an agricultural education among them. I mean an elementary, a systematic one: we train our youth (at school) for the counting-house, and not for the farm. We teach them the mysteries of the *cent per cent*; all the dark intricacies of annuities, all the crooks and turns, and all the advantages of barter, discount and fellowship. While of Na-

tural Philosophy, Chemistry, Botany, Mineralogy, Geology and other sciences, directly or indirectly connected with agriculture, they remain as ignorant as if they never were to apply any of the principles to practice. Can it then be wondered that agriculture has advanced so little? Ought we not rather to wonder that it has advanced so much as it has, since so little pains are taken to qualify our youth to make improvement in it. As an art it is perhaps more capable of improvement than any other, because the sciences on which it is founded, are more numerous and more extensive in their nature.

By whom are improvements to be made? by men whose knowledge of the art has never deviated from the beaten track which their forefathers had trodden, and this knowledge was bequeathed to them with this condition, "thus far shalt thou go and no farther?" Common sense answers in the negative. Do we expect important improvements in our present systems of agriculture, from men who have been educated merchants or schoolmasters? Their minds cannot be sufficiently interested in such subjects to pursue them either with ardour or with profit. They have never acquired a taste for those studies which would render the different operations of farming a series of philosophical experiments.

In too many instances, farmers' sons, who have been educated as above described, lose all relish for their occupation, and engage in some mercantile business. In many instances they contrive to worry through life without deserting their calling, though they receive little pleasure from any part of it, except counting the money which it yields. The source from which we have received our new systems of farming lay in quite a different quarter. Inhabitants of cities, or men who have been educated for some learned profession, are our teachers in the rules

of husbandry. We will suppose these men to be well versed in the sciences above alluded to. But have they ever learned their application to agriculture? If not, as well might they adduce principles on that subject, as a person to attempt solving an abstruse problem in surveying, who has only learned the elements of geometry. When I spoke of an *agricultural education*, I did not confine my views to the sciences above specified. *Practice* is an indispensable part of this education. The chemist may sit in his laboratory and give us a system of agriculture, stolen from European treatises, and may occasionally sprinkle it with some hard words of his own; but it is only the *practical and scientific farmer* that can draw from this heterogenous mass, all that is valuable and applicable to his own purpose, and nothing more. The principles he receives from books must be tested by experiment. To make important deductions from these experiments, unwearyed patience must be exercised, in order to sift real conclusions from those which are only plausible. Let him not sit down supinely, after having ascertained a rule, for general rules in this science as in most others have their exceptions, and an accurate knowledge of these exceptions will require much time for discernment, and investigation. If agriculture, then is an art of calling forth all the faculties of the mind, why is it not taught like other arts by a regular and systematic education.

AGRICOLA.

FROM THE NATIONAL INTELLIGENCER.

On the Grape Vine, with its wines, brandies, salt, and dried fruits.

No. II.

The object of these papers is to excite to objects of agriculture, manufacture, commerce, and consumption,

tion of the utmost importance to the prosperity of our country. The forms and niceties of literary composition will yield their claim to attention to the more solid substance of the pertinent information and suggestions.

In the course of the consideration of this subject, several letters from living friends to our prosperity have been brought together. The remainder of this paper will be appropriated to the publication of one of those letters, of very recent date, from a native of the United States, of the best opportunities, in *Bordeaux*, the emporium of that part of the kingdom of France which gives to us the largest quantities of the most esteemed wines and brandies which enter into our regular consumption. It here follows, in its own clear and instructive terms.

"I have been favoured by your letter of the 24th. *Chaptal*, sur la Culture de Vine, *l'Abbe Rozier's* memoire sur le meilleure maniere de faire et gouverner les Vins, and *Jullien's* Topographie de tout les Vignobles, are the authors the most in repute in France on the vine and on wine. The first and last can be had in Philadelphia; and if *Rozier's* memoir is not to be found, as it is an old book, you can doubtless find at your French book stores, his Dictionary of Agriculture, 5 vols. in 4to. which, under the head of *Vine*, will give you all the information you desire.

"The district which produces the best wine, about *Bordeaux*, is *Medoc*. That county is divided into upper and lower *Medoc*, lying between the *Gironde* and *Garonne* and the Bay of *Biscay*. It is much such a country, as to hill and dale, or general surface, as that between Philadelphia and *Trenton*, of a sandy, sandy-loam, and gravelly soil, with some few exceptions of small patches. About seven leagues from north to south, and three from east to west, of this district, is occupied with vineyards, which produce

the best wine, whose expositions are from east to south.

"In this district, *Lafitte*, *Chateau Margaux*, *Latour*, *Leoville*, *La Rose*, *Braune Mouton*, and *St. Julien*, with various other qualities of *Claret*, are produced, which bring from \$60 dollars the ton, of 4 hogsheads, (or 252 gallons,) to \$600, according to the estimation they are held in. The vines in this district are not suffered to grow above three feet from the ground.

"*Hautbrian* is produced on a single estate of that name, lying in *La Grave*, about a league south of *Bordeaux*. The soil is sandy and gravelly; so much so that you would hardly suppose it capable of vegetation.

"The districts which produce *Sauterne*, *Barsac*, and *Grave* wines, lie from the skirts of the city south about four leagues, presenting much the same swell of surface as that part of New Jersey through which the mail runs between *Trenton* and *Brunswick*. The name of this district, (or, more properly speaking, the northern part of it,) *Grave*, denotes its soil *Gravier—Gravel*. I have seen hundreds of acres of vines in *Grave*, growing in pebbles, from the size of a bean and nutmeg to that of an egg, without the least vestige of earth, cracking under foot, and filling one's shoes. Of the white wines of *Bordeaux*, *Sauterne*, *Barsac*, and *Corbinioux* are of the first quality; but there are many other growths which vie with them, and the ordinary qualities of these white wines are various. I have purchased good pleasant white wine at six dollars the cask of sixty-three gallons. The quantities sent to this country cost from \$12 the cask to \$40. Of the other wines you mention, I have no knowledge.

"It has been stated that two millions of acres are taken up in the cultivation of the vine, in France, producing, one year with another, five hogsheads of sixty-three gallons to the acre; which, at the moderate

price of fifty francs, or ten dollars, the hogshead, gives one hundred millions of dollars. This produce is immense; and, what renders it still more valuable is, that it does not lessen the quantity of other necessary productions, such as wheat, &c.; for where the vine generally grows in France, nothings else will grow: such is the poverty of the soil generally employed for vines.

" They have the wild vine in France. I have seen large quantities of it near Bayonne, and round the foot of the Pyrenees, up to Pau: the inhabitants make beautiful hedges of it, and I have been assured by a distinguished naturalist, Mr. Pennieres, who is now in the Alabama territory, that some of the excellent grapes of France have been produced from the wild vine, after some years of careful cultivation. He is now engaged in inoculating our wild vines with those of France, from which he expects the most favourable results.

" I shall conclude these hasty observations by an extract from *Rozier*:

" ' The vine is a plant whose transpiration and suction is abundant and vehement, which sufficiently indicates the soil and exposition natural to it. For this reason, grounds, composed of sand, gravel stones, and rotten rocks, are excellent for its cultivation.'

" ' A sandy soil produces a fine pure wine. The gravelly and stony a delicate wine. Rotten and broken rocks a fumy generous wine, of a superior quality.'

" ' A rich, strong, compact, cold or humid soil, which is pressed down by the rains, and which the sun hardens or bakes, is essentially prejudicial to the quality of the wine.'

" ' The most advantageous exposition for the vine is that of a gentle slope, or side of a hill, facing east and south, on which the rays of the sun continue the longest time.'

" ' Hills, in the neighbourhood of the ocean and rivers, ought to be preferred to all others. The lower parts

of these hills are not so favourable to the vine as the upper, and neither are equal to the middle region, the soil being the same.'

" ' All trees are unfriendly to the vine, as much from their roots as their shade. All who cultivate the vine, should remember this precept of Virgil: *Apertos Bacchus amat colles*.—The vine flourishes in the open unshaded hills.'

" ' In a word, the vine ought never to be planted in soils that can produce grain, &c. because it wants nothing but heat, and thrives best in the poorest ground. This will appear ridiculous to those who look for quantity: but as to the quality of the wine, it is in strict conformity with the laws of vegetation and with experience. I must be understood to speak here of countries only whose temperatures are favourable to the success of vineyards. We must except those in more northern latitudes. These general precepts admit of no exceptions: They will be acknowledged by all those who, with good faith, and free of prejudices, have studied the cultivation of the vine. If other modes and precepts are followed, we cannot answer for the age of the vine, or the quality of the wine.'

These views of the locality, soils, and exposures of the fine *Bordeaux* wines, such as the white, or *Sauterne*, and *vin de Grave*, and the red or clarets, such as *La Fitte*, *Chateau Margaux*, &c. will be left, for the present, on the public mind, with a firm confidence in their due impression, accompanied by the remarks that the difference between our temperatures, in our present wooded condition, and that of the south west of France, may be safely taken at eleven or twelve degrees; and that the progress of clearing lands and draining swamps will reduce that difference, in a few years, below ten degrees. Thus, St. Mary's, in Georgia, will ultimately prove about as warm, for vegetation, as Oporto in Portugal, and the pro-

ductions of Europe, in any given latitude, may be found in, or, as we drain and clear, introduced into the United States, in latitudes nine or ten degrees farther south. The pride of all Europe is certainly the wines of the following places:

Champagne.	$\{ 49^{\circ}$ N. in latitude	$\{$ in Europe equal to 39° to 40° in U. S.
Burgundy,	48	38 to 39
Old Hock wine.	$\} 49$	39 to 40
Bordeaux, Claret, & Sauterne.	$\} 45$	35 to 36
Best brandy of the wine grape: Bor- deaux and Cognac.	$\} 45$	35 to 66
The wine dis- tricts of Eu- rope for the finest wines from Mala- ga and Xe- res to Ep- ernay, in Champagne.	$36\frac{1}{2}$ to 49	$27\frac{1}{2}$ to 39 or 40

A Friend to the National Industry.
PHILADELPHIA, Nov. 5, 1819.

Officers of the Philadelphia Society for Promoting Agriculture, elected January 18, 1820.

President.

RICHARD PETERS.

Vice Presidents.

WILLIAM TILGHMAN, GEORGE LOGAN,
JAMES MEASE, ROBERT COLEMAN.

Treasurer.

EDWARD BURD.

Secretary.

ROBERT VAUX.

Assistant Secretary.

RICHARD WISTAR, Jun.

Committee of Correspondence.

RICHARD PETERS, JAMES MEASE,
ZACCHEUS COLLINS, WILLIAM TILGHMAN,
JOHN VAUGHAN.

Curators.

ISAAC C. JONES, JAMES M. BROOME,
STEPHEN DUNCAN, JOSEPH R. PAXSON.
REUBEN HAINES.

At the annual meeting of the Philadelphia Society for Promoting Agriculture, held first month 18th, 1820, it was

Resolved unanimously, That the thanks of the Society be presented, and they are

hereby presented to WILLIAM TILGHMAN, for his able and highly valuable Address delivered this day by the appointment of the Society; and that he be requested to furnish a copy for publication.

By order,
ROBERTS VAUX, Secretary.

An Address delivered before the Philadelphia Society for Promoting Agriculture; at its Anniversary Meeting, January 18th, 1820. By WILLIAM TILGHMAN, L. L. D.; chief justice of the State of Pennsylvania, and one of the Vice Presidents of the Society.

ADDRESS.

Gentlemen of the Agricultural Society.

When you did me the honour of requesting me to deliver this Address, you did not expect that I should enter into minute details of the process of Agriculture. Such an attempt might expose my own ignorance, but could not add to your information. The object of our Society is the *promotion of Agriculture*. Whatever conduces to this end, either immediately or even remotely, is worthy of our attention, and within the scope of our Association. In this view of the subject, I perceive so wide a range, that there is less difficulty in finding objects, than in making a proper selection. To call forth the exertions of the Society its zeal must be excited. But zeal is not to be excited, without a conviction of the importance of the cause in which we are engaged. May I be permitted then, to declare my conviction, that amidst the profusion of Societies with which the present age abounds, there is none more useful, or more dignified, than that for the *promotion of Agriculture*. Indeed, in point of utility, I might justly say that it *precedes* all others. Because, even if mankind could exist without Agriculture, yet they could exist only in a savage state, and in small numbers. The great command "*increase and multiply*," could not be obeyed. There could be nothing worthy the name of art, or science, or literature. When I cast my eye on the map of Pennsylvania, and view the vast quantity of excellent land, in the rude state in which nature formed it, I am struck with astonishment at the multitudes which throng our cities, struggling with hunger, cold, and disease. Nor is my wonder confined to the lower orders of society. For I see many of liberal education, and with the means of acquiring a competency in the country, wasting their lives in disgraceful idleness, or fruitless efforts to force their way through the crowds which block up every avenue to profit or preferment. The flood of commerce

which set upon our shores during five and twenty years of war and disorder in Europe, has given to our cities a premature growth. In every branch of trade and commerce there are too many competitors. Labourers are too numerous. Every mechanic art, every liberal profession is overdone. Happy would it be for the city, and happy for the country, if any efforts of this Society could inspire a respect, and a taste, for an *art* in which no man need be ashamed to employ his faculties; for a *condition*, which after all, seems most congenial to the nature of man. It is a life, to which, at one time or other, we all aspire. For who is there, that amidst the eager pursuit of wealth or ambition, does not sometimes pause, and console himself with the fond, though often fallacious hope, of passing his latter days in the independence, the ease, the plenty, the safety, and the innocence of the country! In Pennsylvania, young men of education would have peculiar advantages in spreading themselves through the country, for it is a fact (and we are every day feeling the effects of it) that in no state in the union, is education so much confined to towns. There are many inhabitants of this city, who hold extensive tracts of land, which neither they nor their children have ever seen. This is a bad state of things. For, through ignorance of the quality, the situation, and value of their lands, these persons are sometimes a prey to speculators, and sometimes, erring on the contrary extreme, they conceive extravagant notions, and refuse to sell at a fair price. Hence Agriculture suffers—either the land remains a desert, or they are occupied by poor intruders, who knowing the instability of their title, are afraid to attempt any valuable improvement. These people, with few exceptions, lead a wretched life, and are apt to imbibe sentiments hostile to the proprietors of the soil, whom they consider as natural enemies. Could the parties but see each other, very different feelings might prevail. A little kindness and condescension on the part of the proprietor, might convert a discontented trespasser, into a useful tenant or purchaser. That this has happened in many instances, I know; which induces me to think, that were the trial made, it would happen in many more. Where large property of this kind, is in the hands of heads of families with several children, one or two of the sons might manage the estate to great advantage, by living on the spot. Agents are expensive, and often unfaithful. But one may confide in his own

blood. Besides, the very circumstance of a well educated young man residing in any place, will naturally attract others of similar qualifications, to the same spot; and thus an agreeable society might be formed, and great encouragement afforded to the labouring poor of the neighbourhood. In this kind of policy, the state of New York has set us a good example. And the consequences of her conduct are obvious; a greater proportion of her lands is settled, and her unsettled lands, of equal quality, sell for a higher price than ours. Although the views of our society are not confined to the limits of the state, and our earnest wishes are for the prosperity of the whole, and every part of the union, yet it may be considered as our duty to direct our attention more particularly to Pennsylvania. We cannot be accused then of acting with ungenerous policy, if we endeavour to promote the settlement of our own lands in preference to those of our neighbours. We may, without impropriety, suggest all fair and honourable arguments, to convince the emigrants from the eastern states, and from Europe, that it is their interest to establish themselves here, rather than seek a residence in a distant country, to the west or the south. It is not my intention to enter deeply into this subject. It might be enough, to suggest to the Society, the utility of circulating good pamphlets, which have already been written, or may be written hereafter. But, one or two leading facts it may not be amiss to mention. The rich productions of the south, are not to be attained, but by men of considerable capital. The object is tempting, but when offered to the consideration of emigrants from Europe, or our sister states to the eastward, they will remember that the climate where rice, cotton, tobacco, indigo, and sugar flourish, is generally unfavourable to health; and that these articles are not to be cultivated to advantage, without slaves. They have therefore to engage in a new kind of life, opposed to the habits and principles in which they have been educated, and which, however flattering the outset, will probably terminate in an enfeebled body and discontented mind.

But the great class of emigrants, is that of people who have small capitals, and must seek their bread, by the labour of their own hands. To such persons, health is every thing. The languid eye of sickness dwells without pleasure, on the fairest prospects of nature. In vain is the fertile bottom, or the rich prairie, offered to the arm unnerved by disease. It is a no-

torious fact, that rich, low, level countries, are subject to fevers. They should therefore be shunned by those who are to live by their own labour. Another great inconvenience in those countries is, that they are badly supplied with water, either for drinking or machinery. If, indeed, the lands in the western region, were extremely cheap, and those in Pennsylvania at a price beyond the reach of a poor man, he must go to the west from necessity. But that is not the case,—our lands are believed to be as low priced, as those beyond the Ohio; and much more so, when there is taken into the calculation (as there ought to be) the expense of the journey. Another important circumstance in our favour, is a much better market for the sale of our productions, and the purchase of necessary articles. This is important at all times, but peculiarly in war, when the Mississippi, the only inlet or outlet of the whole western country, may be blockaded by a hostile fleet.

* * * * *

Let it not be supposed, that the interests of Agriculture and of Commerce are at variance. On the contrary, they are inseparable. Of this the Agriculturists of the United States have had good proof. No persons on earth have profited more by commerce. During the long wars of Europe, the staple productions of the middle states sold at double price, and those of the southern states were very high, both during the war and after. Those prices were produced, in part, by the influx of wealth, which occasioned an increased consumption at home, and in part by exportation to foreign countries, but principally by the latter. Both causes, however, sprang from commerce; and both, as long as commerce exists, will continue to operate in a greater or less degree. Indeed, if we could suppose a nation cut off from all intercourse with other nations, (that is, from all foreign commerce) that nation, though abounding in all the necessities of life, would be barbarous, selfish, illiteral, and ignorant. Neither let us give way to the idea, that either agriculture, or commerce, are incompatible with domestic manufactures. Unwise laws, may injure either one or the other, by unjust preferences; but under proper regulations, they will aid, and invigorate each other. This is not the place for entering into a disquisition of the degree of encouragement which should be afforded by law, to manufactures. That important subject is before the national legislature,

where it will no doubt, receive an impartial and mature consideration. But thus much may be said, with certainty; that it is the *duty*, as well as the *interest*, of all of us, to use *our own*, in preference to *foreign* manufactures, where they can be furnished on reasonable terms. It cannot be denied, that manufactures afford a sure market, for the productions of the neighbouring country; and as they are multiplied, in the same ratio, are the markets increased. And there is a peculiar advantage in markets of this kind, at a distance from navigable waters; that, the consumption being at home, the expense of carriage is saved. But, there is a kind of manufacture, *domestic in the strictest sense*, the benefit of which is inestimable, because while it adds to the *stock* of the family, it protects their *morals*.—I allude to spinning, weaving, and such things as are done by the hands of the husband, the wife, or the children, without leaving their home. It guards them against *idleness*, that child of folly, and parent of vice, and is often clear gain, as it occupies those hours which would have been passed in inaction. I am afraid, that in this kind of industry, we have rather degenerated. A very respectable gentleman, a member of the Society of Friends, informed me, that about the year 1764, he attended a meeting in Chester county, near the borders of Maryland, and that most of his society in that neighbourhood, were clothed *completely* and *handsomely* in dress of their own manufacture. Were he to visit that meeting now, I doubt whether he would see his friends in the same kind of apparel. Yet meritorious examples are not wanting, even now, and I hope I shall be excused for mentioning one lately communicated to me. In the western part of Pennsylvania, on this side of the Alleghany river, lives a man, who, ten or twelve years ago, seated himself on a tract of land, to which he had no title, in the humble character of a *squatter*.* This man has converted a wilderness into a fine farm; and, with the assistance of an illustrious wife, brought up a large family of children. He raises on his farm all the materials for clothing the family; and whatever they wear, of linen or woollen texture, excellent in their kinds, is spun, woven, and manufactured in the house. They also make their own sugar, from the maple; and their own leather; and *purchase* (or rather *barter* for) nothing but

* A term in use, in New York and Pennsylvania, to denote a man who seats himself on land to which he has no title.

iron, and salt. Their farming utensils are chiefly homemade.—But what is more commendable than all (and perhaps the cause of all) *very little whiskey or ardent spirits is drunk by any of them.* To finish the picture, I have to add, that the proprietor of the land, with views, no less *politic* than *liberal*, has confirmed these good people in their title, on moderate terms—so that this little story contains a moral, from which, both *settlers*, and *proprietors*, may profit.

It has been apprehended by some, that the late fall in the price of land, and its productions, would damp the ardour of cultivators, and deter men of capital from employing their funds in the purchase of real property. This apprehension appears to be ill founded. If the profits of farming have been diminished, so likewise have the profits of all other business; so that there is no particular reason for withholding funds from an investment in land. We are in a state of distress, which I trust, will be but temporary; for the country has great resources, and sufficient knowledge to bring them into action. A stagnation of commerce was to be expected, on the cessation of the wars in Europe.* But this stagnation is not peculiar to America—she shares it in common with all the world—we have indeed, particular distress, arising from our own errors, on the subject of banks. An immoderate issue of bank paper, afforded an unhappy facility of borrowing. The money when borrowed, must be made use of in some way—many of the borrowers, having no good use for it, either trifled it away, in unnecessary expenses, or in the purchase of land, which soon rose, nominally, to twice its value. Such a state of things could not last long—the delusion is past. It is to be lamented, that many good people have been the victims of this infatuation; but we must comfort ourselves with the hope, that some good will result from it, if a cure is not attempted by rash and violent means. As a people, we had become too extravagant and too luxurious. The slow but sure progress of industry was despised. Every man was in haste to be rich, by some visionary project, dignified with the name of *speculation*. But we are now suffering for these follies, and

by suffering, we shall be purified, and brought back to better habits. This will be a lasting good. Instead of desponding then, let us prosecute our business with increased vigour and economy, and we shall soon find, that although we have fewer paper dollars, we have more real wealth, and what is of much greater importance, better morals, and of course more happiness. A large capital is at present locked up, because the owners are in doubt how to employ it. When business shall flow in decided channels, this capital will be brought into activity. It is almost certain, that neither commerce, nor bank stock will be as profitable as they have been; so that there is a strong probability of an investment of a large capital, in real estate, which, after all, possesses a stability unknown to any other kind of property.

But, it is in our own power, to increase the value of our lands by an improved state of Agriculture. Much has been done, but much more remains to be done. Though not at the bottom of the hill, we have not yet ascended half its height. It may be encouraging however to stop for a moment, and take a glance at the progress we have made. Before the war of the revolution, little of science was blended with the art of agriculture—things had gone on in their natural course. The counties first settled, now known by the names of Philadelphia, Delaware, Chester, Montgomery, and Bucks, though not rich (except the meadows) were sufficient to yield good crops at first, and tolerable ones for a number of years. But the soil near the surface, composed of vegetable substances accumulated during the lapse of ages, became at length exhausted by repeated tillage without refreshment. Red clover was introduced before the war, but it was produced in small quantities, and almost solely for the purpose of hay. The system of melioration by a rotation of crops, in which grass took its turn, was not understood. Natural meadow was in great demand, and not much hay being produced on the uplands, it was impossible to support during winter, a stock sufficiently large to amass a great quantity of manure. Consequently the crops of grain, and particularly of wheat were much diminished. Indeed, the *wheat* crops were trifling. Gypsum had been imported, in small quantities before the revolution; but it was very little used, and very little talked of; and that little not to its credit, for an old proverb, said to come from Germany, was brought up against it, “*that gypsum made rich fathers, but poor sons.*” Notwithstand-

* In a letter of the late President Adams, published since the delivery of this Address, he says he remembers that the like depression of commerce, manufactures and real estate, took place after the wars, which ended in 1748, 1763, and 1783.

ing this prejudice, it was brought into general use, some years after the war, by the persevering efforts of a few, *and principally of the President of this Society*, to whom future generations will render thanks for this important service. Through the efficacy of this fossil, the face of the country experienced a magic change. The uplands were clothed with rich herbage, to which succeeded plenteous crops of grain. I have not been able to trace with certainty, the progress of the cultivation of clover aided by gypsum, but I believe, that Philadelphia was the centre, from which it spread in all directions. In Chester county, so great were its effects, that (as I heard it proved in the trial of a cause at West Chester,) the price of lands was doubled in a few years. Nor is there any reason to suppose that it was less beneficial in other places.

But as the excess of even a good thing may be pernicious, so may it be with gypsum. That it promotes the growth of many vegetables, and of clover in particular, is certain; though its mode of operation does not seem to be clearly understood. An increased quantity of grass, will support an increased quantity of stock, from which will proceed an increased quantity of manure, and that should be considered as the great end of gypsum. Not that great advantages may not be derived from ploughing in the green clover. But if that is relied on, as the only mode of meliorating the soil, (and in some publications which I have seen, it is asserted to be quite sufficient) we shall probably be disappointed. In Sir John Sinclair's Code of Agriculture, it is said that the practice of ploughing in green vegetables, as a manure, has been tried, in England, and found not to answer; and that more benefit is derived from those crops, when they are consumed by stock, and converted into dung; and Col. John Taylor, (of Caroline county, Virginia) to whose valuable labours the world is so much indebted, is also of opinion, that we ought not to rely on green vegetables only. In the first edition of his *Avatar*, he seemed to think, that nothing more was necessary than clover, but in the second edition, he acknowledged his error, which had been demonstrated by the result of two crops of Indian corn. In 80 acres of land, improved by turning in the grass, without other manure, the crop averaged 25 bushels an acre. But in 200 acres, where the clover was turned in and the ground also manured, the average was 50 bushels. It is probable, indeed, that the ploughing in of clover, may have a greater effect in

many parts of the United States, than in England. For, that large crops of grain have been produced by it, is so strongly attested, that it must not be denied. This may be owing to the superior efficacy of the gypsum, which, no doubt, acts more powerfully here, than generally in England, and therefore produces a greater quantity of clover. But, as it is certain, that the manure of dung, incorporated with putrefied vegetable matter, is more efficacious than simple green vegetables; what I intend, is to exhort our farmers not to trust to the latter alone, nor relax their efforts to collect the former in as great quantities as possible.

Another important circumstance is to be attended to. We are not to expect, that land will continue to produce luxuriant crops of clover, for ever, even when aided by gypsum.—It would be contrary to the order of nature; which delights in change. Our *second* crop of clover, has, for many years, been of little value, though the cause remains unexplained. A gentleman of veracity, who lives on the Delaware, between eight or ten miles above the city, assured me, that gypsum, which had done wonders for a long time, had at length ceased to have any effect on his land; and that the same was the case of some of his neighbours. I am informed also, that the same remark has been made by farmers in Montgomery county. Now it is not to be supposed, that the gypsum has changed its nature, or lost its virtue.—But the earth, being exhausted of those particles which are favourable to the growth of clover, no longer offers to the gypsum the same matter to act upon. That the matter, necessary for the formation of a particular plant, may be exhausted, while the same earth suffices for the vigorous production of other plants, is proved by daily experience; and is in accordance with the best theory.

In a late English publication, there is an offer of a considerable premium to the person who shall discover a grass which shall be a good substitute for clover, it being understood that clover no longer grew as formerly; and of another premium to the person who shall discover the means of restoring lands, which once bore clover, to a capacity of producing it again. It would, therefore, be wise in us, to look out in time, for some grass, to take the place of clover, when it shall be found no longer to succeed. In the mean time, we may avail ourselves (and it may perhaps be a very long time) of the united efficacy of gypsum and clover.

I said that we had much to do before

we attained that degree of perfection which was practicable in agriculture. I presume, that our lands, in their natural state, were full as good as those of England. In England, the average crops of grain of all kinds, on 8,000,000 of acres, are estimated at twenty-four bushels the acre. I take this estimate from Sir John Sinclair, who says, moreover, that in "fertile districts and propitious seasons, from thirty-two to forty bushels of wheat an acre, may be confidently expected; from forty-two to fifty of barley, from fifty-two to sixty-four of oats, and from twenty-eight to thirty-two of beans." The best county in Pennsylvania, is supposed to be Lancaster. The matter cannot be spoken of with any kind of certainty; but, from the best information I have been able to collect, I should doubt whether the *wheat* crops of the whole county of Lancaster, averaged more than fifteen bushels an acre, though many individual farmers get from twenty to thirty; and some from thirty to forty. But, when we compare the agriculture of two countries, we must take it in large masses. Penn's Valley, in Pennsylvania, is supposed to yield crops of *wheat*, averaging at least twenty bushels an acre; but that is owing to something peculiar in the climate; for the crops do not ripen in less than two weeks later than in most other parts of the state. The soil in Penn's valley, is limestone, and the water lies very deep.

There is no doubt, however, that the agriculture of Pennsylvania is steadily improving, and is at present actually improved as highly as that of any state in the union. In buildings for agricultural purposes (perhaps too expensive) she is unrivalled; so that without being over sanguine, we may promise ourselves an annual increase of the value of our lands. How this progress may be quickened, is a question which this Society should keep constantly in view.—To devise the means of acceleration, should be their study.—To the first great step towards general improvement, the organization of societies in every part of the state, we have had one what was in our power, by petitioning the legislature to take the subject into consideration, and aid the undertaking with necessary funds. Nor is there any reason to doubt of success; for the legislature is always liberal when the general interest demands it. The institution of county societies, with the distribution of premiums, will be a powerful stimulus to the dormant faculties of thousands. The Eastern States, including New York, have already made the experiment with success; and I honour them

for the example. Our Society, being situated in the capital, has the best means of correspondence; so that we can reciprocate information on agricultural subjects, with the different societies throughout this, and other states, and with countries beyond the sea. Hence will be collected a stock of knowledge, which being condensed, and methodized, may be offered to the public with great advantage.

A pattern farm is an object we have long had at heart, and it is not to be relinquished. But the time is not come, for carrying our wishes into effect. At present, we have not sufficient funds; and to incur a debt, in our corporate capacity, without the means of payment, would justly dishonour us. But the want of a pattern farm may be in some measure supplied, by the exertions of members of the society, who possess farms within a few miles of the city. Some of them are blessed with ample means, as well as inclination, to give a fair trial to every improvement which can be rationally suggested, either in instruments of husbandry, the application of manures, or the cultivation of new plants, grains, or grasses.

We may render ourselves useful, by collecting and diffusing the information contained in books recently published in Europe or America. In Europe the principal nobility and gentry are paying due honours to Agriculture. Chemistry has been called to her aid, from which important discoveries must result. Earths, minerals, and manures of all kinds are analysed. Philosophy is in the right path. Facts are first ascertained, and then accounted for. The increased power of magnifying glasses, lays open the hidden parts of plants, and minute animals. Hence may be discovered the *causes*, and consequently the *cure*, of many disorders by which plants are infested. Already it is asserted, (I vouch not for the truth of it) that the disease in wheat called the *smut*, is no other than a parasite plant, which adhering to the seed-wheat, grows with it, and may be destroyed by proper applications, before the seed is sown. Perhaps some fortunate observer may let us into the nature of that scourge of Agriculture, known by the name of the Hessian fly, so that we may get rid of it, as we did of the weevil fly, some forty years ago. Such a man would deserve a statue of gold, and I think the farmers would gladly erect it.

Another point of duty, to which we have not been wanting, is the importation of such foreign grains, grasses, and plants, as are suitable to our climate. Of all the

grains which now grow in the middle states, I recollect none, but maize, (Indian corn) which is native. Perhaps we have not yet collected all which might be profitably cultivated; and even if we have, a change of seed is of great importance. What wealth has flowed into the southern states, from cotton, which, thirty years ago, was scarce known there! Something new is always turning up, and we should be on the alert, to avail ourselves of it.

The Society has heretofore given admonition of the necessity of change in seed-grain. I do not mean merely the change of one grain for another of a different kind, (as *wheat* for *rye*, &c.) but a change of seed, where there is no change of kind. Farmers do not seem aware of this necessity, nor of the great advantage of procuring seed of the very best kind, and cleaning it in the most perfect manner. Or if they are aware, they are deterred from paying attention to it, by a little trouble and a little expense. It would be well to keep the subject before their eyes, until a conviction of its importance shall produce an alteration of practice.

The importation of foreign animals is not to be neglected. It is not the business of this Society, nor have they the means of importing them;—but they may point them out. We have, in Pennsylvania, good horses; but in the best breeds of cattle, hogs and sheep, we are defective. I know that some enterprising gentlemen in the city have gone to great expense in importing cattle, and others are in possession of excellent breeds of hogs, but they are not yet diffused through the state. It is understood, that in the Eastern States, no pains or expense have been spared, in procuring animals of the finest shape and quality. But it may be some time, before they have a surplus for exportation.

We are well situated for obtaining models of all newly invented implements of husbandry. Our workmen are ingenious, and able to execute any thing which is planned for them; and the genius of our countrymen in the application of the mechanic powers, is conspicuous. The high price of labour, rendered its abridgement of primary importance. What wonderful effects have been produced by Whitney's cotton gin? We are well supplied with implements for breaking the earth, and for cutting all kinds of straw, and cheap machines for shelling Indian corn. But a machine effectual for the threshing of wheat, and not too high-priced, is a desi-

deratum. The machine for dressing flax, of British invention, is said to be a very great improvement, but is not yet much in use among us.

Roads, bridges, canals, and all internal public improvements, are subjects, which though not within our control, have such an immediate bearing on Agriculture, by expediting and cheapening carriage, that it will be always proper to do what little is in our power, for their success. Works of such magnitude are not to be executed, without the combined exertions of many persons, sanctioned by the authority of the legislature, and assisted by the public purse. Our legislature has done nobly for roads and bridges, and we trust it will do the same for canals. The first great object of that kind, is the junction of the waters of the Susquehanna and the Schuylkill, which empties into the Delaware. That being accomplished, we may look westward to the waters of the Alleghany, and northward to the Seneca lake, which being once entered, and entered it may be with no great difficulty, we have the Delaware connected with the great northern lakes, by means of the magnificent work now in rapid progress, in the state of New York. The project is grand;—I may not live to see it executed, yet it is by no means so improbable as many things once appeared, which in my time have been accomplished.

Yet, it must be confessed, that in canals, we linger behind other states, who have boldly led the way. Except the works now carrying on, for the improvement of the navigation on the Schuylkill and the Lehigh, we have nothing to show but the Conewago canal of a single mile, which will be of little use, unless the Susquehanna and Delaware are united. Our tardiness may be accounted for. Five and twenty years ago, when the Conewago canal was begun, public spirit mounted perhaps too high. Great efforts were made, which, from causes not necessary now to mention, proved abortive.—Hence, a despondence on the subject of canals, from which we have scarce yet recovered. But it is high time to rouse ourselves. On the one side we have New York making great and successful exertions; on the other, Maryland, endeavouring to avail herself of the road, made at the expense of the United States, from Cumberland, on the Potowmac, to Wheeling, on the Ohio; on which wagons travel free from toll. But, if we can have water carriage from Philadelphia to Susquehanna, we shall be on a better footing than Baltimore; and preserve our wagon carriage to Pittsburg

until the Susquehanna shall be joined to the Alleghany. This wagon carriage is of immense importance. It has been supposed, that between Philadelphia and Pittsburg, the yearly sum paid for carriage, amounted to 730,000 dollars. Nor is this the only consideration. A very great sum is expended all along the line of the turnpike road, which is diffused through the country to a considerable distance. A six horse wagon consumes five bushels of oats a day, besides hay. Now, it appears from an official return, made by the keeper of the turnpike gate, at the Chesnut Ridge, between Stoys Town, and Greensburg, that there passed through that gate, during the year ending May, 1818; among other things, 281 four-horse, 2412 five-horse, and 2698 six-horse teams; and it is said, that a gentleman, living on the road near Pittsburg, in the year 1813, counted the number of wagons, laden with merchandize, which passed his house that year, and that they amounted to 4055. Through the counties of Bedford and Somerset, the road, being generally on ridges, runs through a poor country, to which the market afforded by the wagons, is essential. Somerset abounds in *grass*; and for *oats* is superior to any county in the state.—But the soil is not favourable to wheat; and, except in the southern part, Indian corn will scarce arrive at maturity. It appears, clearly, therefore, that the Agriculture of Pennsylvania is very much interested, even in parts far west of the Susquehanna, in a water communication between that river and the Delaware, as the most effectual means of preserving the land carriage to Pittsburg. Another weighty consideration is, the protection which ought to be afforded to Pittsburg, against the effect of the United States' turnpike from Cumberland to Wheeling. Pittsburg ought to be to the western part of the state, what Philadelphia is to the eastern: the reservoir of wealth sufficient to afford a market to the surrounding country. There is no rivalship between these cities. The prosperity of one promotes the prosperity of the other. Why then should we hesitate? New York has completed 120 miles of canal in less than two years and five months. By a line of less than half that length, the Delaware and Susquehanna are united.

Pennsylvania has been accused of want of attention to gardening, and I am afraid she must plead guilty to the charge. A good kitchen garden contributes much to the health, and even the elegance of life; the saving of meat makes it a source of economy, and the neatness which is necessary

to keep it in order, may have an effect on the *manners* of the family. The females might execute a good deal of the work, and for their sake it should be interspersed with flowers. I believe my feelings are not at all singular, and I declare that I am struck with a sensation of pleasure, at the sight of a flourishing, well enclosed garden. May I be allowed to add, that I have the same feelings, at sight of a neat inclosure in front of the dwelling house, separating it from the highway. With surprise and regret, I perceive this often neglected, by wealthy and liberal farmers, merely because they have been in the habit of living without it. Such things might be remedied at a very trifling expense, but they are of no trifling consequence. They have an influence on manners.

I say nothing on the subject of *hedges*, their importance, and the best mode of raising them have been fully shown by one of our Vice Presidents, on a former occasion.

The limits of this discourse confine me to *hints*, on subjects which merit *treatises*. May not means be taken to tincture the youthful mind, with the spirit of Agriculture? In *colleges*, natural philosophy and chemistry might sometimes be directed to that special purpose. But something may be done at an *earlier age*; particularly where opportunities are offered, in teaching the learned languages, which being acquired slowly and with difficulty, leave lasting impressions; for instance, besides the *Georgics* of Virgil, which are in general use, select passages might be read from Columella, one of the most ancient writers on rural affairs, which have reached us, in the Latin tongue. I am afraid mischief is done, by putting into the hands of boys, those finished models of Grecian and Roman eloquence, in which are painted, in too vivid colours, the pleasures of wine, and love, and the glory of war.

Having touched the subject of education, I will add, that when the benevolent intention of the constitution of Pennsylvania, shall be carried into effect, by "*the establishment of schools throughout the state, in such manner, that the poor may be taught gratis*," Agriculture will reap her full share of the benefit. Reading, writing, and common arithmetic, if not essential, are very serviceable to the farmer. And even the labourer will derive incalculable advantage from the improvement of his intellectual faculties. Work cannot be continued without intermission, and time hangs heavy on the mind which is torpid during the hours of repose. Exercise is

as necessary to the mind as the body. How desirable then, that men should be qualified for that kind of reading, which gratifies and strengthens the mind, without the fatigue of severe study, while the body is at rest during the intervals of labour? Our legislature is not unmindful of the duty imposed by the constitution—the act “to provide for the education of children at the public expense within the city and county of Philadelphia,” is working great good. By the first annual report of the controllers of these schools, made in February last, it appears that 2845 children were then in a course of education; and I am informed that the number is now much increased. Moreover, a most important fact is established—that by adopting the Lancasterian mode of teaching, which will do in all thickly settled districts, the annual expense will not exceed *four dollars* for each child. Upon efforts like these the blessing of God may be confidently hoped for.

Nothing can be more effectual for the diffusion of the spirit of Christianity, than a moderate cultivation of the understanding. Men will thus become more mild, better content with the condition in which Providence has placed them, more attentive to their duties both moral and religious, more charitable towards each other, less jealous and vindictive in their feelings towards foreign nations, less prone to rapine, under whatever name disguised, and less easily dazzled by the false splendour of war.

But I must indulge myself on this topic no longer, lest it seduce me from my main design.

Closely connected with Agriculture is the subject of leases. Though not so important in the United States, as in other countries, because the body of tenantry is smaller here, yet it is not undeserving of attention. The leases generally in use, are for a short term, with a reservation, by way of rent, of a certain share of the produce of the land. This system is liable to two great objections. The shortness of the tenure, precludes all hope of improvement of the soil, and the mode of payment, (the rendering a share of the crop,) holds out inducements to fraud, which few tenants are able to resist. When the landlord lives upon the estate, he has some chance of checking the tenant, by obtaining an accurate knowledge of the amount of the crop; and if he is liberal, he may have something done in the way of improvement. But where he lives at a distance, the probability is, that the estate will go to ruin, while he receives but a

small part of his due. The objections to long leases, for rents in money, are, that if the landlord parts with the possession for a long time, he may be injured by a bad tenant; that he precludes himself from the chance of a sale, if a good price should be offered, and that the great fluctuations in the price of grain, make it impossible to fix a rent in money, without danger to both parties. Where a man has it in view to sell his estate, he may be right, in making a short lease; that case forms an exception to the general rule. But where he means to keep it, the objection is removed; then, as to fluctuation of price, the matter might be easily managed, by reserving a rent of a certain quantity of grain, giving the tenant an election to pay the market price, in money, which might be more convenient than delivering the grain. That point being settled, a lease for a longer term, fixing the rotation in which the fields should be cultivated, with other proper covenants, would leave the landlord sufficiently protected, while it gave the tenant encouragement to meliorate the soil for his own interest. At the end of such a lease, the value of the estate would be increased, and the rent might be raised. With great deference I submit these remarks to gentlemen of the city, who have farms at some distance, or even in the neighbourhood, which are intended as a provision for their families.

One thing more remains, which I cannot in conscience pass by, and in which, perhaps the Society may find means to do some good. Can no method be devised, to check the inordinate use of spirituous liquors? This shocking habit, strikes at the root of agriculture, by robbing it of the labour necessary for its support. It would be a waste of time, to enumerate the ills which flow from this disgraceful vice, because they are obvious to every one. Perhaps a small addition to the wages, would induce labourers to forego the use of this poisonous liquid; or they might consent to take as a substitute, beer, or cider, or some other harmless drink. The subject deserves the deepest consideration, and I cannot help hoping, that when societies shall be organized in the several counties, a plan may be formed, which being acted upon at once, throughout the state, may greatly lessen, if not eradicate the evil.

I have endeavoured, gentlemen, to obey your commands, in hopes that my example may call forth the efforts of others, better qualified to do justice to the subject.

Law Case.

The following opinion delivered by JACOB RUSH, President of the Court of Common Pleas of the City and County of Philadelphia, will be found particularly interesting by persons residing in the Country, and who may be exposed to controversies about line fences, and their repairs. The examination of the provisions of the act of Assembly, and of the principles of law on the points involved in the case will be interesting and useful to every Lawyer.

Overseers of the Poor
of Byberry,
^{vs.}
F. I.

Common Pleas, Philadelphie County,
Certiorari.

A Certiorari issued out of this Court, directed to Joshua Jones and Elisha Gordon, Esquires, requiring them to transmit certain proceedings had before them under the fence law of 1700, in which John T. Townshend and Israel Walton Overseers of the poor of Byberry are the complainants, and F. I. the defendant.

Prior to stating the facts on the return, it will be proper to give a brief exposition of the very obscure law upon which the controversy has arisen.

The act of 1700, for the regulation of fences, gives authority to fence viewers in two cases.—1st. Where a person finding a fence actually erected, takes advantage of such existing fence, and makes it a part of a subsequent enclosure. The person making such subsequent enclosure, and deriving a benefit from his neighbours fence, is bound to pay one half the expense of such fence. He is equally bound afterwards himself to keep in repair one half of it, or to pay the expense of repairing it.—Which leads to the 2d. point, and this consists in the power the fence viewers have over fences, either erected or subsequently divided, by agreement between two neighbours. The fence viewers cannot compel a person to join fences with his neighbour, every man having an undoubted right

to erect a fence upon his own ground. The authority of the viewers is derived from the consent of the parties expressed or implied. In the case of a person deriving a benefit from making a fence actually existing, a part of the enclosure around his own field, he virtually agrees by his conduct, to make compensation.—In the 2d. case, viz: repairing fences, the parties are supposed to have joined originally in erecting the fence, or by some subsequent contract, to have come under an engagement to keep in repair a moiety of the fence.

The viewers being only judges of the value, or of the sufficiency of fences, cannot order a new fence to be erected. In the former case, that is, the value, they are to award compensation; in the latter, they are to direct the party delinquent to repair the fence, and in case of his neglecting it for ten days, then upon application and proof thereof before two Justices, they are to order the *persons aggrieved* to repair the fence, who shall be reimbursed by the party refusing to repair the fence. When the party *aggrieved*, has repaired the fence, in obedience to the order of the two justices, the fence viewers, who by the law are the *sole judges* of the charge to be borne by the delinquent, must be called upon to fix the amount of compensation, to be reimbursed by the delinquent, for which sum, together with costs, the justices are required to issue a warrant against him to be levied upon his goods and chattels.

If the viewers and the two justices have in all respects conformed to the law, and have kept *within* their jurisdiction, the facts cannot now be controverted. What are the facts in this case?

The viewers have been legally summoned to view and examine a fence which separates the lands of the complainant's from the land of the defendants. They say they were called to view a *partition fence* be-

tween the said parties, and that on such examination, they found the defendant's part to be deficient, or not lawful, and that they directed him to make a good and sufficient fence *on the line* within ten days. This order of the viewers is dated 21st January, 1815.

The defendants having neglected to repair the fence for *more* than ten days, the complainants did according to law, apply to two justices for an order to be issued to him to repair the fence, which order, the said justices, after being satisfied by due proof, that the defendant had neglected to repair the fence, for ten days, did issue on the 26th August, 1815.—To this order the complainants have returned to the justices that they have complied therewith and repaired the fence.

As far as the proceedings have gone, every thing has been done agreeable to the law.

Four exceptions however have been filed by the defendant. The first and second objections may be comprised in one, and present a difficulty of a legal nature, that the complainants represent a corporate body, and are therefore not included in the law that relates to fences.—If this objection were well founded, its operation would be conclusive in favour of the defendant, because a law that does not bind both parties in interest, never ought to be carried into execution against *either*.—In our opinion, however, the law in the case before us includes *corporate bodies*, as well as natural persons. The statute 22. H. 8. ch. 5. for the repair of bridges which subjects to taxation, the *inhabitants* of every Shire, Riding, City, or Town, and for non-payment of which their goods may be seized and sold, has been universally acknowledged and held to include *Corporations*. 2 inst. 703. comp. 79. Sir T. Jones 167.

The word *Inhabitants*, says Sir Edward Coke, is the largest word of the

kind, and includes every corporation or Body Politic, residing in any County, Riding, City or Town. To these authorities we shall only add, that in 2 Bac. Abr. Wilson's Edition, page 10, it is expressly laid down, that *Corporations* in the character of owners or occupiers of houses or lands, are subject to the same burden to which *individuals* are subject, in the same character.

The good sense of these decisions, must strike every body, as their tendency is to place natural and artificial bodies on the same footing.

The third exception filed by the defendant, viz : that the two justices ordered the complainants to put up the fence, *without* requiring proof that the defendant had *not* complied with the order of the viewers, is destitute of foundation. The record of the justices show that this exception is founded in mistake.

The fourth exception is, that the viewers had no authority to order the defendant to put up and repair his fence *on the line*.

It is certain they could not order him to put it up or repair it *off the line*; and having directed him to repair it *on the line*, cannot invalidate the order. Viewing the words, *on the line*, in the most exceptional light, they can be deemed nothing but surplusage. The substantial drift of the order is, that the defendant shall repair the fence.

With respect to the affidavit of the defendant of the 6th of January, 1816, that he has enclosed completely the burial ground on his own ground, leaving an interval of 10 feet between the line of the burial ground and the fence he has put up, the Court would remark, that generally speaking, a man has a right to put up a fence upon his own land, and as many as he pleases. A man must however so exercise his right, as not to injure those of another. Having once joined fences with his neighbours he cannot, when ordered to repair his share

of it, evade the law, by removing it, and placing it altogether upon his own ground. Where the law has once laid its hands upon a man, he must not be allowed to escape from its operation. Nothing can meet the approbation of a Court, that would look like an evasion of the law. A man cannot in one and the same breath, say he is bound and not bound. Whether a person might remove his share of a *division fence* and place it upon his own ground, prior to an inspection by the fence viewers, is a point not now before the Court. But we are very clearly of opinion, removing a fence *after* it had been repaired in obedience to the order of two Justices, cannot exempt him from the operation of the law.

There being no error in point of law in the proceedings removed, the judgment of the Court is, they must be confirmed.

[*Poulson's Am. daily Adv.*

MISCELLANY.

Modes of salutation.—From the form of salutations among different nations we may learn something of their character, at least of their manners. In the southern provinces of China the common people ask "Ya Tan," that is, How have you eaten your rice; for in that is their greatest felicity. If two Dutchmen meet in the morning they wish each other good appetite. "Smaakelyk leten." In Cairo the inhabitants ask how do you sweat? for the not sweating is the symptom of an approaching fever. The Italian and Spaniard ask How does it stand? "Come sta." The Frenchman, How do you carry yourself? "Comment vous portez vous?" The German, How do you find yourself? "Wie befinden sie sich." The English, "How do you do?" The Dutchman says, How fare you. "Hau vaart uwe." There is one nation (we forget

which) which ask "How do you live," and these are certainly the most wise of all.

To make starch.—To make starch from wheat, the grain is steeped in cold water until it becomes soft and yields a milky juice by pressure; it is then put into sacks of linen, and pressed in a vat filled with cold water; as long as any milky juice exudes, the pressure is continued; the fluid gradually becomes clear, and a white powder subsides, which is starch.

Chestnut wood has recently been successfully applied to the purpose of dyeing and tanning, thus forming a substitute for log-wood, and oak bark. Leather tanned by it, is declared by the gentleman who made the experiments, to be superior to that tanned with oak bark; and in dyeing, its affinity for wool is said, on the same authority, to be greater than that of either galls or sumac, and consequently the colour given more permanent. It also makes admirable ink.

The ants of Valencia.—M. Humboldt informs, that ants abound to such a degree near Valencia, that their excavations resemble subterraneous canals, which are filled with water in the time of the rains, and become very dangerous to the buildings.

Mr Heathfield has published a pamphlet, in England, proposing to pay off one half of the national debt, by an assessment of 15 per cent. on the capital of all property in the kingdom. The Courier says the project "is wise, necessary, and will be effectual," and permit the repeal of twenty millions of taxes.

Longitude.—La Baronne De Paris Boisrowvray, has arrived in England from Paris, charged with a commission to present to the Admiralty Board, a theory of the compass, which gives the longitude and latitude of the globe, for the discovery of which the whole world has so long looked.

The husband of this lady has submitted his theory to the Academy at Paris. His wife's mission to London was to prevent delay, as well as to have a trustworthy agent.

Indian Jurisprudence.—The Cherokees, it is said, have established something like a judiciary system, and introduced into their society many of the laws and usages of civilization. Some of their savage institutions are disappearing, under the ameliorating influence of moral justice. As a specimen of the manner in which they dispense justice in cases of trivial import, we relate the following anecdote, said to be authentic:

An Indian assaulted another, of which regular information was made. The judge ordered the sheriff to bring the parties before him. The sheriff went in pursuit of them, but returned without them. "Where are your prisoners?" said the judge. "I caught them," replied the sheriff.—"What did you do with them?" I gave the defendant fifteen lashes." "What did you do with the plaintiff?" "Gave him fifteen too." "What with the informer or witness?" "Why I gave him twenty-five lashes—for, had he held his tongue, there would have been none of this fuss and trouble." It would be well if all the dispensations of justice could be so equally and promptly administered.

[*Savannah Museum.*]

Preservation of Water at Sea.—M. Pernet, after an examination of the means which are, or may be adopted for the preservation of fresh-water at sea, gives the preference to the following: 1½ parts of oxide of manganese in powder is mixed with 250 parts of water, and agitated every fifteen days. In this way water has been preserved unchanged for seven years.

The editor of the *Annales de Chimie* observes, that oxide of manganese has the power, not only of preserving water, but of rendering that

sweet which has become putrid; but he also points out the important circumstance, that the oxide is slightly soluble in water, and therefore recommends the use of iron tanks for the water, as in England.

A species of limestone has been discovered in working the canal through the state of New York, and since in many parts of the country, so well adapted for water cement as to supersede the necessity of importing, as heretofore done, at great expense the principal ingredient of hydraulic mortar.

Charleston, January 27.—We have seen a specimen of white marble, recently discovered in Spartanburg district, about five miles from Broad river. It is acknowledged to be very superior; and its grain is said to surpass that of the Italian marble.

—
DIED,

At Charleston, (S. C.) on the 8th instant, Mrs. STARR BARRETT, aged one hundred and twenty years—a Jewess, born in one of the Barbary states in the year 1699, but since the year 1780 a resident of Charleston.

On the 1st ult. near Annapolis, (Md.) THOMAS LANE, aged 107 years—born within 5 miles of the place on which he died. Until a few months past was able to do considerable business on his farm.

At Newport, (R. I.) on the 29th ult. WILLIAM ELLERY, Esq. in the 93d year of his age. *He was one of the signers of the declaration of independence.*

On Saturday last at his residence, in Chester County, the Rev DAVID JONES, A. M. Senior Pastor of the Great Valley Baptist Church, at the advanced age of 84 years.

At Boston, on Friday last, Don JUAN STAUGHTON, his Catholic Majesty's Consul in that town for above thirty years, aged 75.

At Chacewater (England) aged 21, ELIZABETH, daughter of Joseph Ralp; her height was only two feet ten inches; she was not at all deformed, but rather well proportioned; she was never known to laugh or cry, or utter any sound whatever, though it was evident she both saw and heard; her weight never exceeded twenty pounds.

On Saturday, the 29th of January, at

their late residence in Wantage, County of Sussex, New Jersey, GEORGE BACKSTER, Esq. and his wife JANE, in the 64th year of their ages—were married 42 years. The wife survived her husband but 15 hours.

At Nazareth, (Penn.) on the 2d ult, in the 76th year of his age, DR. JOSEPH OTTO.

At Ringwood, (England,) CHRISTOPHER COBB, aged 102, who lived in the reigns of three kings.

At Richmond, (Va.) on Tuesday, the 8th inst. ROBERT COWLEY, a man of colour, aged 125 years. For many years he had been a faithful servant to the commonwealth of Virginia, by acting as door keeper to the Capitol, which office was given him by the executive, as a reward for his revolutionary services, in which situation he gave universal satisfaction.

The following is a correct list of the number of DEATHS, in the principal cities of the United States.

PHILADELPHIA—3124, from 1st January, 1819, to 1st January, 1820.—*Of these, there were*

Males of 20 years and upwards,	795
Do. under 20 years,	824
	—1619
Females of 20 years and upwards,	616
Do. under 20 years,	659
	—1275
Children, principally under one year, whose sex is unknown,	230
	—
Total,	3124

NEW YORK—3176, from 1st January, 1819, to 1st January, 1820.—*Of these, there were*

Men, - -	895
Boys, - -	871
	—1746 Males.
Women, - -	703
Girls, - -	727
	—1430 Females
Total,	3176

REMARKS.—It must be highly gratifying to the benevolent mind, and to those whose humane labours have been so long directed to mitigate the ravages of Small Pox, to learn, that there has not been a single case of death, by that disease, reported in this city within the last year—a disease which has been, for so many ages, a scourge to every part of the world; and has, at times, been particularly fatal here.

Whilst Consumption and Fever, generally, occupy a considerable space in the annual returns, it is consolatory to observe,

that the former has not increased: and that Fever, particularly Typhus, so fatal, so wide spread, and so unyielding to medical skill in Europe, has been much less malignant in this city the present, than in former years.

GEORGE CUMING, *City Inspector, City Inspector's Office, }*
10th Jan. 1820. }

BALTIMORE, from 1st January, 1819, to 1st January, 1820—2287; of which number, 571 were coloured persons.—*Of these, there were*

Above 20 years,	849
Below 20 do.	1440
	—2287

BOSTON, from 1st January, 1819, to 1st January, 1820. Total, 1070

CHARLESTON—1092, from 1st October, 1818, to 1st October, 1819.—*Of these, there were*

Males, -	639
Females, -	453
	—1092

Of whom, there were

Whites, -	492
Blacks, -	600
	—1092

It is a singular fact, and perhaps worthy the attention of medical gentlemen, that more deaths were occasioned by TETANUS or LOCKED JAW, in the city of Charleston, during the last three years, than occurred in the cities of Philadelphia, New York, Baltimore, and Boston, during the same period, as is shown by the following abstract:—

DEATHS BY TETANUS OR LOCKED JAW.

	1817	1818	1819	Total.
Charleston,	-	25	20	14
		.	.	.
Philadelphia,	-	9	3	3
		.	.	.
New York,	-	3	5	4
		.	.	.
Baltimore,	-	2	3	2
		.	.	.
Boston,	-	1	0	1
		.	.	.
	15	11	10	36
	—	—	—	—

Excess in Charleston, } above the whole number in the four cities. } 10 . 9 . 4 . 23

Christenings and burials in London last year—Christened 12,574 males, and 11,726 females—total 24,300.

Buried 9,671 males and 9,557 females—total 19,228. Being a decrease of 477 burials from the preceding year.

FOR THE RURAL MAGAZINE.

The following trifle was published in one of the earlier numbers of the Port Folio, when that work was edited by the late Jos. DENNIE; but the author would be gratified, by seeing it transplanted into the columns of the *Rural Magazine*.

THE ASPEN TREE.

Lines written on seeing an *Aspen tree*, which the venerable owner had determined to fell; but observing the initials of the name of a much lamented son incised on the bark, he resolved to protect it from every assailant.

Hail! fortunate tree, which has weather'd the blast,
And 'seaped the blind fury of woodchopper's arm,
Thy bark was inscribed in times which are past,
And the favourite letters protect thee from harm :

For to the fond breast of a father they bring,
The image how dear ! of a promising youth ;
Whose bosom was warm as the noon-tide of spring,
Whose conduct dictated by virtue and truth :
But alas ! when the summons to sleep with the dead,
Is signed by the merciless fingers of death,
Nor virtue, nor truth can its influence shed,
To detain for a moment the fast ebbing breath.

His soul from its cerement compelled to depart,
Winged its way to the regions of bliss and repose,
And left a loved parent in sorrow of heart,
To think on his loss, and to tell o'er his woes :
But though the fond form to his eye may be lost,
Yet shall dear *mementos* recall it to mind ;
And the tree which by tempest and storm has been toss'd,
Shall with tremulous motion still wave in the wind.

E.

FOR THE R. MAGAZINE.

SONG OF GRATITUDE.

Who bade to light the morning skies,
The glorious orb of day to rise ?—
Who first the waves of ocean curl'd,
And roll'd its waters round the world ?—
Who bade the soil the harvest yield
And deck'd the flow'rets of the field—

From Chaos this terrestrial ball
Call'd into life ?—The GOD of all.
He, within whose almighty hands
Humility supported stands,
Who with his own bestow'd our breath
And saved us from eternal death.

To him then let us joyous raise
The song of gratitude and praise,
And bless him, that his bounties flow,
In endless streams to all below ;
And that his boundless grace has given,
To man—a final rest in heaven.

A.

THE HAMLET,

AN ODE BY THOMAS WARTON.

The hinds how blest who ne'er beguil'd,
To quit their hamlet's hawthorn wild ;
Nor haunt the crowd, nor tempt the main,
For splendid care, and guilty gain !

When morning's twilight tintur'd beam
Strikes their low thatch with slanting gleam,
They rove abroad in ether blue,
To dip the scythe in fragrant dew ;
The sheaf to bind, the beech to fell,
That nodding shades a craggy dell.

'Midst gloomy glades, in warbles clear,
Wild nature's sweetest notes they hear :
On green unrodden banks they view
The hyacinth's neglected hue :
In their lone haunts, and woodland rounds,
They spy the squirrel's airy bounds :
And startle from her ashen spray,
Across the glen, the screaming jay :
Each native charm their steps explore
Of Solitude's sequester'd store.

For them the moon with cloudless ray
Mounts, to illume their homeward way.
Their weary spirits to relieve
The meadows, incense breathe at eve.
No riot mars the simple fare,
That o'er a glimmering hearth they share :
But when the curfeu's measur'd roar
Duly, the darkening vallies o'er,
Has echoed from the distant town,
They wish no beds of eygnet down,
No trophied canopies, to close
Their drooping eyes in quick repose.

Their little sons, who spread the bloom
Of health around the clay-built room,
Or through the primrose coppice stray,
Or gambol in the new-mown hay ;
Or quaintly braid the cowslip-twine,
Or drive afield the tardy kine ;
Or hasten from the sultry hill,
To loitre at the shady rill ;
Or climb the tall pine's gloomy crest,
To rob the raven's ancient nest.

Their humble porch with honey'd flow'rs
The curling woodbine's shade embow'rs :
From the small garden's thymy mound,
Their bees in busy swarms resound ;

Nor fell Disease, before his time,
Hastes to consume life's golden prime ;
But when their temples long have wore
The silvan crown of tresses hoar ;
As studious still calm peace to keep,
Beneath a flowery turf they sleep.

VERSES WRITTEN AFTER SEEING WINDSOR CASTLE.

BY THOMAS WARTON THE ELDER.

From beaut'ous Windsor's high and storied halls,
Where Edward's chiefs start from the glowing walls,
To my low cot, from ivory beds of state,
Pleas'd I return, unenvious of the great.
So the bee ranges o'er the vary'd scenes
Of corn, of heaths, of fallows, and of greens ;
Pervade the thicket, soars above the hill,
Or murmurs to the meadow's murmuring rill ;
Now haunts old hollow'd oaks, deserted cells,
Now seeks the low vale-lily's silver bells ;
Sips the warm fragrance of the green-house bowers,
And tastes the myrtle and the citron flowers ;
At length returning to the wonted comb,
Prefers to all his little straw-built home.

FINLAND SONG.

Addressed by a mother to her child.

BY DR. LEYDEN.

Sweet bird of the meadow, oh ! soft be thy rest,
Thy mother will wake thee at morn from thy nest ;
She has made a soft nest, little red-breast for thee,
Of the leaves of the birch, and the moss of the tree.
Then soothe thee, sweet bird of my bosom, once more,
"Tis Sleep, little infant, that stands at the door.
"Where is the sweet babe?" you may hear how he cries,
"Where is the sweet babe?" in his cradle that lies ;
"In his cradle, soft swaddled in vestments of down,
"Tis mine to watch o'er him till darkness be flown."

QUIET MIND.

"My mind to me a kingdom is,
Such perfect joy therein I find,
As far exceeds all earthly bliss,
That God or nature hath assign'd :
Though much I want, that most would have,
Yet still my mind forbids to crave.

"Content to live, this is my stay ;
I seek no more than may suffice :
I press to bear no haughty sway,
Look, what I lack, my mind supplies.

Lo ! thus I triumph like a king,
Content with what my mind doth bring.

"I see how plenty surfeits oft,
And hasty climbers soonest fall,
I see that such as sit aloft,
Mishap doth threaten most of all :
These get with toil, and keep with fear,
Such cares my mind could never bear.

"No princely pomp, nor wealthy store,
No force to win a victory,
No wily wit to salve a sore,
No shape to win a lover's eye.
To none of these I yield as thrall,
For why ? my mind despiseth all.

"Some have too much, yet still they crave ;
I little have, yet seek no more,
They are but poor, though much they have,
And I am rich with little store :
They poor, I rich ; they beg, I give,
They lack, I lend ; they pine, I live.

"I laugh not at another's loss,
I grudge not at another's gain ;
No worldly wave my mind can toss,
I brook what is another's bane ;
I fear no foe, nor fawn no friend,
I loathe not life, nor dread its end.

"My wealth is health—and perfect ease,
My conscience clear, my chief defence :
I never seek by bribes to please,
Nor by desert to give offence ;
Thus do I live, thus will I die,
Would all did so, as well as I.

"I take no joy in earthly bliss,
I weigh not Croesus' wealth a straw ;
For care, I care not what it is,
I fear not Fortune's fatal law.
My mind is such as may not move,
For beauty bright, or force of love.

"I wish but what I have at will,
I wander not, to seek for more ;
I like the plain, I climb no hill,
In greatest storms, I sit on shore ;
And laugh at them who toil in vain,
To get what must be lost again.

"I kiss not where I wish to kill,
I feign not love where most I hate,
I break no sleep to win my will,
I wait not at the miser's gate.
I scorn no poor, I fear no rich,
I feel no want, nor have too much.

"The court nor camp I like, nor loathe,
Extremes are counted worst of all,
The golden mean between them both,
Both surest sit, and fears no fall.
This is my choice ; for why ? I find,
No wealth is like a quiet mind."

MOONLIGHT AND CALM AT SEA.

When every breeze is hush'd to rest,
And the soft zephyr of the dappled west

Its voice does lose;

When Dian's silver light does sleep,
O'er the smooth bosom of the deep,
How sweet to muse!

When ocean's swelling bosom bright,
Seems studded o'er with golden light,
Of many a star;
And the wild sea fowl's harsh shrill strain
Echoing along th' unruffled main
Is heard afar;

'Tis then each rising care does sleep
With the soft stillness of the deep,
In sympathetic power.

'Tis then each swelling pulse does thrill,
And sweetest bliss the heart does fill,
In such an hour.

The soul too fond is soothed to rest;
By mild serenity possess'd,
Nor thinks the storm is nigh;
But soon the placid scene is o'er,
And swelling ocean round does roar,
Contesting with the sky.

'Tis thus on life's deceitful tide,
With placid course we seem to glide,
All free from care;
But soon the too delusive charm,
Flies fast away with every calm,
And prospect fair!

Then happy they, who list'ning hear,
The voice that speaks the tempest near.
And arms for every ill;
The whirlwind blast is then disarmed,
Of many a shaft that would have harm'd
And half the storm is still.

GO, IDLE LAYS!

In imitation of Waller's "Go, lovely Rose!"

Go, idle lays!

Tell her whose youthful heart beats high
To future days

That now so fair in prospect lie,
How soon our dearest transports die.

Tell her whose cheek
The blush of conscious pleasure wears,
That they who seek
To find delights unmix'd with cares
Shall own the fond deceit in tears.

Say that while charms
Which Hebe's transient presence lends
The bosom warms,
Time's envious breath the canker sends
That youth's enchanting season ends.

To her whom health
With ruddy blushes high illumes,
Say that by stealth
Disease to pallid wrinkles dooms,
The cheek that now so sweetly blooms.

Tell her whose form
The partial hand of Beauty gave,
That from the worm
Kind Pity's touch shall never save
The charms that moulder in the grave!

Go, idle lays!

Tell her whose youthful heart beats high
To future days
That now so fair in prospect lie,
How soon our dearest transports die!

Then softly say
That, when terrestrial joys and pains
Shall melt away,

The soul, absolv'd from sensual stains,
Shall soar where bliss immortal re'gns!

Port Folio.

Mrs. Morris, the lady of major Morris, who lately descended in the diving-bell, at Plymouth, whilst under water, wrote a long letter to her father, which concluded with the following lines:—

From a *belle*, my dear father you've oft had a line:
But not from a *bell* under water;

Just now I can only assure you I am thine—
Your diving affectionate daughter.

TO CORRESPONDENTS.

Of the few essays refused admittance in the *Rural Magazine*, we regret most, the necessity we apprehend ourselves under of declining to insert the one on Politics by Lucius. The ability with which it was written, was not sufficient to overcome our objection to the subject.—We invite him heartily, as we have heretofore personally done, to our *Evening Fire Side*, when he may be disposed to amuse or instruct our company on any suitable subject.

Our other friends, who know they are welcome, we hope will not require a monthly invitation.

PHILADELPHIA,

PUBLISHED MONTHLY BY

RICHARDS & CALEB JOHNSON,

No. 31, Market Street,

At \$3 00 per annum.

GRIGGS & DICKINSON—Printers, Whitehall.